

Revised per * See below	Document No.: Document Ver.:	<b>A181805</b> <b>6.0</b>
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By: JWL	Checked: NPC	Approved: JE	Date: 01/06/2020
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## DOCUMENT INSERTION SHEET

J. M. Farley Nuclear Plant – Unit No. 1 / 2

### NFPA 805 FIRE PROTECTION PROGRAM DESIGN BASIS DOCUMENT

Description	Remove	Insert
1. This insertion sheet	Existing Sheet(s)	Front of Manual
2. 2.0 Licensing Basis, 2.1 Compliance Requirements, page 8 (pdf pg. 10)	Existing Sheet	Ver. 6.0
3. 2.0 Licensing Basis, 2.2 NRC Acceptance, page 9 (pdf pg. 11)	Existing Sheet	Ver. 6.0
This change is required to add a new reference to the approval by the NRC for the Supplemental License Amendment Request (LAR) for NFPA 805. LDCR 2018-041 was approved on November 12, 2018 to request approval for the thermal insulation material already in use in the plant. The NRC approved the NFPA 805 supplemental LAR (ML19156A262) on July 30, 2019 and the Farley Operating Licenses for Unit 1 and Unit 2 were amended to 224 and 221 respectively.		
4. Fire Safety Analysis Data Manager (FSA 4.3), Fire Area ID: 073-SWIS Battery Room - Train B, Page 349 of 3544 (pdf pg. 475)	Existing Sheet	Ver. 6.0
5. Fire Safety Analysis Data Manager (FSA 4.3), Fire Area ID: 074-SWIS Battery Room - Train A, Page 358 of 3544 (pdf pg. 484)	Existing Sheet	Ver. 6.0
6. Fire Safety Analysis Data Manager (FSA 4.3), Fire Area ID: 075-U1-SWIS 5kV Switchgear Room B & West Stairs, Page 368 of 3544 (pdf pg. 494)	Existing Sheet	Ver. 6.0
7. Fire Safety Analysis Data Manager (FSA 4.3), Fire Area ID: 075-U2-SWIS 5kV Switchgear Room B & West Stairs, Page 381 of 3544 (pdf pg. 507)	Existing Sheet	Ver. 6.0
8. Fire Safety Analysis Data Manager (FSA 4.3), Fire Area ID: 076-U1-SWIS 5kV Switchgear Room A & East Stairs, Page 394 of 3544 (pdf pg. 520)	Existing Sheet	Ver. 6.0

9. Fire Safety Analysis Data Manager (FSA 4.3), Fire Area ID: 076-U2-SWIS 5kV Switchgear Room A & East Stairs, Page 406 of 3544 (pdf pg. 532)	Existing Sheet	Ver. 6.0
Fire safety analysis for fire dampers 1-188-332-01 and 1-188-332-02 change the HSS column value from "YES" to a dash "-". These dampers are not HSS per calculation SM-C051326701-017.		
*SNC1054863M001 Ver. 1.0		
SNC1058565C001 Ver. 1.0		





# DWG A-181805

## NFPA 805 Fire Protection Program Design Basis Document

### JOSEPH M. FARLEY NUCLEAR PLANT

#### Southern Nuclear Operating Company

**Version: 5.0**

Name and Date	
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SNC Acceptance:	Jessica Walker 7/10/2018 

**TABLE OF CONTENTS**

<b>1.0</b>	<b>PURPOSE .....</b>	<b>5</b>
1.1	Compliance Requirements.....	5
1.2	NRC Acceptance .....	5
1.3	Ongoing Compliance Maintenance .....	5
<b>2.0</b>	<b>LICENSING BASIS .....</b>	<b>7</b>
2.1	Compliance Requirements.....	7
2.2	NRC Acceptance .....	8
2.3	Ongoing Compliance Maintenance .....	11
<b>3.0</b>	<b>DEFINITIONS .....</b>	<b>12</b>
3.1	NFPA 805 and Related Definitions .....	12
3.2	Plant Definitions .....	18
<b>4.0</b>	<b>DESIGN BASIS .....</b>	<b>19</b>
4.1	NFPA 805 Methodology .....	19
4.1.1	Compliance Requirements .....	19
4.1.2	FNP Results .....	20
4.1.3	NRC Acceptance.....	21
4.1.4	Ongoing Compliance Maintenance .....	21
4.2	Fundamental Fire Protection Program and Design Elements.....	22
4.2.1	Compliance Requirements .....	22
4.2.2	FNP Results .....	22
4.2.3	NRC Acceptance.....	24
4.2.4	Ongoing Compliance Maintenance .....	24
4.3	Nuclear Safety Performance Criteria (NSPC).....	24
4.3.1	Compliance Requirements .....	24
4.3.2	FNP Results .....	26
4.3.3	NRC Acceptance.....	28
4.3.4	Ongoing Compliance Maintenance .....	29
4.3.5	Recovery Actions .....	41
4.3.6	Non-Power Operations.....	43
4.4	Fire Probabilistic Risk Assessment.....	44
4.4.1	Compliance Requirements .....	44
4.4.2	FNP Results .....	45
4.4.3	NRC Acceptance.....	46



4.4.4	Ongoing Compliance Maintenance .....	47
4.5	Fire Modeling .....	49
4.5.1	Compliance requirements .....	49
4.5.2	FNP Results .....	49
4.5.3	NRC Acceptance.....	49
4.5.4	Ongoing Compliance Maintenance .....	49
4.6	Radioactive Release .....	50
4.6.1	Compliance Requirements .....	50
4.6.2	FNP Results .....	50
4.6.3	NRC Acceptance.....	51
4.6.4	Ongoing Compliance Maintenance .....	51
4.7	Fire Response.....	51
4.7.1	Compliance Requirements .....	51
4.7.2	FNP Results .....	53
4.7.3	NRC Acceptance.....	54
4.7.4	Ongoing Compliance Maintenance .....	54
<b>5.0</b>	<b>PROGRAM DOCUMENTATION, CONFIGURATION CONTROL, AND QUALITY .....</b>	<b>55</b>
5.1	Program Documentation .....	55
5.1.1	Compliance Requirements .....	55
5.1.2	FNP Results .....	55
5.1.3	NRC Acceptance.....	55
5.1.4	Ongoing Compliance Maintenance .....	56
5.2	Configuration Control .....	56
5.2.1	Compliance Requirements .....	56
5.2.2	FNP Results .....	56
5.2.3	NRC Acceptance.....	56
5.2.4	Ongoing Compliance Maintenance .....	57
5.3	Quality .....	57
5.3.1	Compliance Requirements .....	57
5.3.2	FNP Results .....	57
5.3.3	NRC Acceptance.....	57
5.3.4	Ongoing Compliance Maintenance .....	58
<b>6.0</b>	<b>MONITORING .....</b>	<b>59</b>
6.1	Compliance Requirements.....	59

6.2	FNP Results .....	59
6.3	NRC Acceptance .....	60
6.4	Ongoing Compliance Maintenance .....	60
<b>7.0</b>	<b>FIRE SAFETY ANALYSIS .....</b>	<b>61</b>
7.1	Compliance Requirements.....	61
7.2	FNP Results .....	61
7.3	NRC Acceptance .....	61
7.4	Ongoing Compliance Maintenance .....	61
<b>8.0</b>	<b>REFERENCES .....</b>	<b>62</b>
8.1	Industry References .....	62
8.2	Nuclear Regulatory Commission .....	62
8.3	Licensing .....	64
8.4	Site-Specific References.....	67
8.4.1	Calculations.....	67
8.4.2	Drawings .....	68
8.4.3	Procedures .....	68

## APPENDIX TABLE OF CONTENTS

Appendix A.	OVERVIEW OF THE REGULATORY REQUIREMENTS – 10 CFR 50.48
Appendix B.	POWER BLOCK AND FIRE AREA DEFINITION
Appendix C.	NSCA METHODOLOGY REVIEW
Appendix D.	FUNDAMENTAL FIRE PROTECTION PROGRAM AND MINIMUM DESIGN ELEMENTS
Appendix E.	RECOVERY / DID ACTIONS BY FIRE AREA
Appendix F.	FIRE SAFETY ANALYSIS
Appendix G.	RADIOACTIVE RELEASE RESULTS

## 1.0 PURPOSE

The purpose of this Design Basis Document is to demonstrate how Joseph M. Farley Nuclear Plant (FNP) satisfies the requirements of 10 CFR 50.48(a) and 10 CFR 50.48(c).

### 1.1 Compliance Requirements

In accordance with NFPA 805 Section 2.7.1.2:

*"A fire protection program design basis document shall be established based on those documents, analyses, engineering evaluations, calculations, and so forth that define the fire protection design basis for the plant. As a minimum, this document shall include fire hazards identification and nuclear safety capability assessment, on a fire area basis, for all fire areas that could affect the nuclear safety or radioactive release performance criteria defined in Chapter 1."*

Compliance requirements for specific sections are outlined in each section.

### 1.2 NRC Acceptance

The NRC does not provide formal acceptance of the Design Basis Document. However, the NRC did acknowledge Farley's commitment to create a design basis document that meets the requirement of NFPA 805 Section 2.7.1.2 as summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) dated March 10, 2015 (Section 2.6.1):

*"In LAR Attachment S, Table S-3, Implementation Item 28, the licensee included the action to create "a fire protection design basis document as described in Section 2.7.1.2 of NFPA 805 and necessary supporting documentation as described in Section 2.7.1.3 of NFPA 805 as part of transition to 10 CFR 50.48(c) to ensure program implementation following receipt of the safety evaluation." The NRC staff considers this action acceptable because the action will incorporate the provisions of NFPA 805 in the FPP and because it would be required by the proposed license condition."*

### 1.3 Ongoing Compliance Maintenance

This document satisfies the methodology and documentation requirements of NFPA 805 Chapter 2 by providing a roadmap to the analyses performed and the programmatic controls for ongoing compliance maintenance. The document is organized as follows:

- Fundamental Program Elements
- Nuclear Safety Performance Criteria
- Fire Probabilistic Risk Assessment
- Fire Modeling
- Radioactive Release
- Fire Response
- Program Documentation, Configuration Control, and Quality
- Monitoring
- Fire Safety Analysis

The revision history for this drawing is as follows. Version 1.0 was the original issue of this document.

Versions 2.0 and 3.0 incorporated modifications and changes in due dates for the license condition required modifications.

Version 4.0 corrected an NFPA 13 code of record discrepancy in Section 4.2.2.

Version 5.0 is a complete rewrite of the Design Basis Document to incorporate the changes made to the facility (over 600 modifications since 2010) and changes made in the Fire PRA model to address new or revised industry guidance and address errors identified in the previous models as part of the true up required prior to self-approval under NFPA 805. Several of the historical calculations that supported the initial NFPA 805 License Amendment Request were appendices to this document and have been deleted to ensure that the approved QA source documents (calculations) are used for reference instead. This rewrite includes format changes to describe the regulatory requirements, initial compliance as described in the NRC Safety Evaluation for NFPA 805 and the ongoing compliance maintenance being utilized by Farley. Changes to several of the Appendices were made and are described below.

Appendix C previously contained a printout from the ArcPlus™ Fire Safety Analysis (FSA) database that documented how the FNP NSCA methodology met the NRC endorsed guidance of NEI 00-01. However, since FSA is a living, controlled QA database, a duplication of this information in this DBD was determined to be not necessary. Therefore, the FSA printout has been deleted from Appendix C. For a copy of the original NSCA methodology evaluation, see calculation SE-513026701-006. For a copy of the current evaluation, contact site Fire Protection.

Appendix D previously contained a printout from the ArcPlus™ Fire Safety Analysis (FSA) database that documented how the FNP Fire Protection Program met the requirements of NFPA 805 Chapter 3. However, since FSA is a living, controlled QA database, a duplication of this comparison in this DBD was determined to be not necessary. Therefore, the FSA printout has been deleted from Appendix D. For a copy of the original comparison, see calculation SM-513026701-003. For a copy of the current comparison, contact site Fire Protection.

Appendix F provides the fire safety analysis for each fire area in Farley Units 1 and 2. The information includes safe shutdown strategy, credited fire protection systems and features, applicable fire protection engineering evaluations, and applicable licensing exemptions. This is a printout from the ArcPlus™ Fire Safety Analysis (FSA) database, which is a living, controlled QA database. This Appendix is provided here for information purposes and is the current information as of the date of the printout in the Appendix. To obtain the latest revision of this printout, reflecting the most current Farley Fire Protection Design and Licensing Basis, contact site Fire Protection.

Appendix G previously contained a printout from the SM-C0513026701-010 Radioactive Release Calculation. This Appendix was for information purposes only as a component of the NFPA 805 License Amendment Request. As SM-C0513026701-010 is revised, the methodology may change and will be reflected in a revision to the calculation. See the latest revision of this calculation for the most current Farley Fire Protection Design and Licensing Basis position on Radioactive Release.

Appendix H was a listing of Fire Protection related drawings that could be used as references when performing fire protection program change evaluations per procedure NMP-ES-035-006. These references are part of that procedure and did not need to be duplicated in this document. Therefore, Appendix H has been deleted during this revision.

No change bars are provided for version 5.0 as the changes are extensive.

## 2.0 LICENSING BASIS

### 2.1 Compliance Requirements

On July 16, 2004 the NRC amended 10 CFR 50.48, Fire Protection, to add a new subsection, 10 CFR 50.48(c), which established alternate fire protection requirements. 10 CFR 50.48(c) endorses, with exceptions, NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants – 2001 Edition (NFPA 805), as a voluntary alternative for demonstrating compliance with 10 CFR 50.48(b), Appendix R and Section (f), Decommissioning.

Southern Nuclear Operating Company submitted a letter of intent to the NRC on February 14, 2008 (ML080450434) for FNP to adopt NFPA 805 in accordance with 10 CFR 50.48(c). A License Amendment Request (LAR) was submitted on September 25, 2012 (ML12279A235). Other transition correspondence with the NRC is listed below:

- December 12, 2012 - U.S. Nuclear Regulatory Commission, letter to Southern Nuclear Operating Company, requesting supplemental information regarding the acceptance of the license amendment (ML12345A398)
- December 20, 2012 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Supplemental Information Regarding License Amendment Request For Transition to 10 CFR 50.48(c) – NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition) (ML12359A050)
- July 8, 2013 – U.S. Nuclear Regulatory Commission, letter to Southern Nuclear Operating Company, Request for Additional Information Concerning Voluntary Fire Protection Risk Initiative Request (ML13176A093)
- September 16, 2013 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14038A019)
- October 30, 2013 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML13305A105)
- November 12, 2013 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML13318A027)
- March 28, 2014 – U.S. Nuclear Regulatory Commission, letter to Southern Nuclear Operating Company, Request for Additional Information Concerning Voluntary Fire Protection Risk Initiative Request (ML14073A053)
- April 23, 2014 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14114A550)

- May 23, 2014 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14147A368)
- July 3, 2014 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14189A144)
- July 11, 2014 - U.S. Nuclear Regulatory Commission, letter to Southern Nuclear Operating Company, Request for Additional Information Regarding License Amendment Request to Adopt National Fire Protection Association Standard 805 (ML14176A070).
- August 11, 2014 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14223A646)
- August 29, 2014 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14246A523)
- October 13, 2014 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML14288A671)
- January 16, 2015 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) – NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML15016A199)
- April 25, 2016 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Supplemental License Amendment Request to revise Existing Facility Operating License Commitments Regarding NFPA-805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants (ML16120A294)
- August 11, 2017 – Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Joseph M. Farley Nuclear Plants Units 1 and 2 NFPA-805 Transition Due Date Extension (ML17226A291)
- December 14, 2018 - Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, Joseph M. Farley Nuclear Plants Units 1 and 2 Fire Protection Alternative for Thermal Insulation Material (ML18348A733)



## 2.2 NRC Acceptance

The NRC initially issued Amendment No. 196 to Renewed Facility Operating License No. NPF-2 and Amendment No. 192 to Renewed Facility Operating License No. NPF-8 for FNP Units 1 and 2, respectively, on March 10, 2015 (ML14308A048) to approve the transition to NFPA 805. However, based on subsequent SNC requests, the NRC issued updated license amendments on October 17, 2016 [Amendments 205 and 201] (ML16232A000) and November 1, 2017 [Amendments 215 and 212] (ML17269A291) to extend the committed due date for achieving full compliance to NFPA 805, and July 30, 2019 [Amendments 224 and 221] (ML19156A262) to approve an alternative for thermal insulation material.

The FNP Unit 1 fire protection license condition 2.C(4) and FNP Unit 2 fire protection license condition 2.C(6) were replaced with the following:

*Southern Nuclear Operating Company shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment request dated September 25, 2012; April 25, 2016; and supplements dated December 20, 2012; September 16, 2013; October 30, 2013; November 12, 2013; April 23, 2014; May 23, 2014; July 3, 2014; August 11, 2014; August 29, 2014; October 13, 2014; January 16, 2015, and August 11, 2017, as approved in the safety evaluation reports dated March 10, 2015, October 17, 2016, and November 1, 2017. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.*

*a. Risk-Informed Changes that May Be Made Without Prior NRC Approval*

*A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.*

- 1) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.*
- 2) Prior NRC review and approval is not required for individual changes that result in a risk increase less than  $1 \times 10^{-7}$ /year (yr) for CDF and less than  $1 \times 10^{-8}$ /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.*

b. Other Changes that May Be Made Without Prior NRC Approval

1) *Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program*

*Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.*

*The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is “adequate for the hazard.” Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:*

- *“Fire Alarm and Detection Systems” (Section 3.8);*
- *“Automatic and Manual Water-Based Fire Suppression Systems” (Section 3.9);*
- *“Gaseous Fire Suppression Systems” (Section 3.10); and,*
- *“Passive Fire Protection Features” (Section 3.11).*

*This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.*

2) *Fire Protection Program Changes that Have No More than Minimal Risk Impact*

*Prior NRC review and approval are not required for changes to the licensee’s fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation reports dated March 10, 2015 and October 17, 2016 to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.*



c. Transition License Conditions

- 1) *Before achieving full compliance with 10 CFR 50.48(c), as specified by 2) below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2) above.*
- 2) *The licensee shall implement the modifications to its facility as described in Attachment S, Table S-2, "Plant Modifications Committed," of SNC letter NL-15-2310 dated April 25, 2016, to complete the transition to full compliance with 10 CFR 50.48(c) before the conclusion of the 1R28 Spring 2018 Refueling Outage as provided in SNC letter dated August 11, 2017. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.*
- 3) *The licensee shall implement the items as listed in Attachment S, Table S-3, "Implementation Items," of SNC letter NL-14-1273, dated August 29, 2014, within 180 days after NRC approval, except for items 30 and 32. Items 30 and 32 shall be implemented by February 2, 2018.*

### **2.3 Ongoing Compliance Maintenance**

Based on the previous section being up to date, this section is no longer applicable. Any future changes to the fire protection licensing basis will be processed in accordance with 10 CFR 50.90, License Amendment Request.

### 3.0 DEFINITIONS

This section establishes the definitions of terms used in this document that apply to the Fire Protection Program and the documents which implement the Program. Some of these definitions come directly from regulatory documents and others come from SNC and Site procedures. The Site and SNC procedure definitions take precedence over this drawing.

#### 3.1 NFPA 805 and Related Definitions

**Acceptable.** Considered by the authority having jurisdiction (AHJ) as adequate for satisfying the goals, performance objectives, and/or performance criteria.

**Approved.** Acceptable to the authority having jurisdiction.

**Authority Having Jurisdiction.** The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure. [The NRC is the AHJ for purposes of nuclear health and safety and common defense and security.]

**Availability.** The probability that the system, structure, or component of interest is functional at a given point in time.

**Combustible.** Capable of undergoing combustion.

**Combustible Liquid.** A liquid having a flash point at or above 100°F (37.8°C). (See NFPA 30, Flammable and Combustible Liquids Code.)

**Compensatory Actions.** Actions taken if an impairment to a required system, feature, or component prevents that system, feature, or component from performing its intended function. These actions are a temporary alternative means of providing reasonable assurance that the necessary function will be compensated for during the impairment, or an act to mitigate the consequence of a fire. Compensatory measures include but are not limited to actions such as fire watches, administrative controls, temporary systems, and features of components.

**Containment.** Structures, systems, or components provided to prevent or mitigate the release of radioactive materials.

**Core Damage Frequency (CDF)** – The metric used to determine the significance of the outcome of the Level 1 PRA model on a per year basis. It is the sum of the accident sequence frequencies of which the end state is core damage.

**Defense-in-Depth.** Defense-in-depth shall be achieved when an adequate balance of each of the following elements is provided:

- (1) Preventing fires from starting
- (2) Rapidly detecting fires and controlling and extinguishing promptly those fires that do occur, thereby limiting fire damage
- (3) Providing an adequate level of fire protection for structures, systems, and components important to safety, so that a fire that is not promptly extinguished will not prevent essential plant safety functions from being performed

**Deterministic Approach.** A deterministic approach establishes requirements for engineering margin and quality assurance in design, manufacture, and construction. It involves implied, but unquantified, elements of probability in the selection of the specific accidents to be analyzed as design basis events. It does not integrate results in a comprehensive manner to assess the overall impact of postulated initiating events.

**Electrical Raceway Fire Barrier System (ERFBS).** Non-load-bearing partition-type envelope system installed around electrical components and cabling that have withstood a fire exposure as established in accordance with an approved test procedure and are rated by a test laboratory in hours of fire resistance and are used to maintain specified nuclear safety functions free of fire damage.

**Essential Personnel.** Personnel who are required to perform functions to mitigate the effects of a fire including but not limited to industrial fire brigade members, operations, health physics, security, and maintenance.

**Fire Area.** An area that is physically separated from other areas by space, barriers, walls, or other means in order to contain fire within that area.

**Fire Barrier.** A continuous vertical or horizontal construction assembly designed and constructed to limit the spread of heat and fire and to restrict the movement of smoke.

**Fire Door.** A door assembly rated in accordance with NFPA 252, Standard Methods of Fire Tests of Door Assemblies, and installed in accordance with NFPA 80, Standard for Fire Doors and Fire Windows.

**Fire Hazard Analysis (FHA).** An analysis to evaluate potential fire hazards and appropriate fire protection systems and features used to mitigate the effects of fire in any plant location.

**Fire Model.** Mathematical prediction of fire growth, environmental conditions, and potential effects on structures, systems, or components based on the conservation equations or empirical data.

**Fire Prevention.** Measures directed towards reducing the likelihood of fire.

**Fire Probabilistic Risk Assessment (FPRA)** – A Fire Probabilistic Risk Assessment determines the risk (core damage frequency and large early release frequency) of a fire originating at an ignition source that damages a target cable or piece of equipment.

**Fire Protection Feature.** Administrative controls, fire barriers, means of egress, industrial fire brigade personnel, and other features provided for fire protection purposes.

**Fire Protection Program (FPP).** The Station Fire Protection Program consists of activities and functions that are performed to minimize the probability and consequences of a postulated fire. In the event of a fire, the program and system designs ensure the capability to shut down the reactor and maintain it in a safe and stable (achieve and maintain safe shutdown) shutdown condition. This includes:

- Classical fire protection elements of fire detection and suppression systems and equipment (including active as well as passive design features) and programmatic/organizational elements for minimizing the chance of fire occurring and ensuring minimal impact should one occur.
- NSCA – Safe Shutdown Capability, the nuclear plant's design capability to achieve Safe Shutdown (Appendix R or CMEB 9.5-1 / NUREG-0800 licensed plants) or Nuclear Safety Capability Safe and Stable (NFPA 805 licensed plants) conditions in the event of a single damaging fire.
- A supporting Fire PRA that provides both overall and detailed risk insights.
- Radioactive Release.
- Non-Power Operations

**Fire Protection System.** Fire detection, notification, and fire suppression systems designed, installed, and maintained in accordance with the applicable NFPA codes and standards.

**Fire Resistance Rating.** The time, in minutes or hours, that materials or assemblies have withstood a fire exposure as established in accordance with an approved test procedure appropriate for the structure, building material, or component under consideration.

**Fire Risk Evaluation (FRE).** An integrated assessment of the acceptability of risk, defense-in-depth, and safety margins. The evaluation compares the risk associated with implementation of the deterministic requirements with the proposed performance-based alternative. The difference of risk between the two approaches shall meet specified risk acceptance criteria, maintain the defense-in-depth philosophy and provide sufficient safety margin.

**Fire Safety Analysis (FSA).** A document that integrates/includes fire hazards identification and nuclear safety capability assessment, on a fire area basis, for each fire area that could affect the nuclear safety or radioactive release performance criteria of NFPA 805. This information is based on those documents, analyses, engineering evaluations, calculations and so forth that define the fire protection design basis for the plant.

**Fire Scenario.** A description of a fire and any factors affecting or affected by it from ignition to extinguishment, including, as appropriate, ignition sources, nature and configuration of the fuel, ventilation characteristics and locations of occupants, condition of the supporting structure, and conditions and status of operating equipment.

**Fire Zone.** A subdivision of a fire area not necessarily bounded by fire-rated assemblies. Fire zone can also refer to the area subdivisions of a fire detection or suppression system, which provide alarm indications at the central alarm panel.

**Fixed Combustible Material** – Any combustible material that is attached to the plant structure, attached to or contained within fixed plant equipment, or permanently installed in the plant, and which in the form it is used, and under the conditions anticipated, will ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat. This definition includes electrical cable insulation within a cable tray or other exposed cable route, regardless of their rating by IEEE-383 flame test, UL-910, or other specification.

**Flame Spread Rating.** A relative measurement of the surface burning characteristics of building materials when tested in accordance with NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials.

**Flammable Liquid.** Any liquid having a flash point below 100°F (37.8°C) and having a vapor pressure not exceeding 40 psi (276 kPa) absolute pressure at 100°F (37.8°C).

**Free of Fire Damage.** The structure, system, or component under consideration is capable of performing its intended function during and after the postulated fire, as needed.

**Fuel Damage.** Exceeding the fuel design limits.

**High-Low Pressure Interface.** Reactor coolant boundary valves whose spurious opening could potentially rupture downstream piping on an interfacing system or could cause a loss of inventory that could not be mitigated in sufficient time to achieve the nuclear safety performance criteria.

**Higher Risk Evolution.** Outage activities, plant configurations or conditions during shutdown where the plant is more susceptible to an event causing the loss of a Key Safety Function such as decay heat removal or electrical power.

**Ignition Source** – A piece of equipment or activity that is capable of causing a fire or explosion, such as open flames, sparks, or hot surfaces. The following are examples of ignition sources

- Air Compressor
- Battery
- Battery Charger
- Electrical, Control, and Switch Panels and boxes.
- Exclusions from counting process:
  - Panels that are part of installation machinery
  - Sample wall-mounted panels housing less than four switches
- Dryers
- Hydrogen Tank
- Hydrogen Mitigation System glow plugs or coils
- Electric Motor (greater than 5 HP)
- H2 Recombiner
- Pump
- Switchgear, Motor Control Centers, DC Distribution Panels
- Transformer (dry or oil-filled, greater than 45 kVA)
- Load Centers, Motor Control Centers, Power Panels, Lighting Panel
- Internal Combustion Engines

**Industrial Fire Brigade.** An organized group of employees within an industrial occupancy who are knowledgeable, trained, and skilled in at least basic fire-fighting operations, and whose full-time occupation might or might not be the provision of fire suppression and related activities for their employer.

**In Situ Combustible.** Combustible materials that are permanently located in a room or an area (e.g., cable insulation, lubricating oil in pumps).

**Labeled.** Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by who's labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

**Large Early Release.** Significant, unmitigated release from containment in a time frame prior to effective evacuation of the close-in population such that there is a potential for early health effects. (Regulatory Guide 1.174) Frequency for those accidents leading to a large, rapid, unmitigated release of airborne fission products from the containment to the environment occurring before the effective implementation of offsite emergency response and protective actions such that there is the potential for early health effects. Such accidents generally include unscrubbed releases associated with early containment failure shortly after vessel breach, containment bypass events, and loss of containment isolation.

**Limited Combustible.** Material that, in the form in which it is used, has a potential heat value not exceeding 3500 Btu/lb (8141 kJ/kg) and either has a structural base of noncombustible material with a surfacing not exceeding a thickness of 1/8 in. (3.2 mm) that has a flame spread rating not greater than 50, or has another material having neither a flame spread rating greater than 25 nor evidence of continued progressive combustion, even on surfaces exposed by cutting through the material on any plane. (See NFPA 220, Standard on Types of Building Construction.)

**Listed.** Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

**Monitoring.** A structured assessment function or process to ensure that 1) availability and reliability of selected fire protection SSC's is maintained at desired levels and 2) the performance of the fire protection program meets performance criteria. Monitoring shall ensure that the assumptions in the engineering analyses are maintained for performance-based, risk-informed fire protection programs.

**Noncombustible Material.** A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat.

**Nuclear Safety Capability Assessment (NSCA).** A collection of analyses used to determine that at least one train of plant systems and equipment is available to support safe and stable plant control in any mode in the event of a postulated fire in any area of the power block.

**Owner/Operator.** The organization(s) with fiscal responsibility for the operation, maintenance, and profitability of the nuclear plant.

**Non Power Operation (NPO) –** In the context of the FP/SSD program, NPO refers to the procedural controls placed on plant operations and operational conditions while the plant is shut down.

**Performance Criteria.** Specific measurable or calculable parameters for systems and features that are quantified and described in engineering terms.



**Performance-Based Approach.** A performance-based approach relies upon measurable (or calculable) outcomes (i.e., performance results) to be met but provides more flexibility as to the means of meeting those outcomes. A performance-based approach is one that establishes performance and results as the primary basis for decision-making and incorporates the following attributes: (1) Measurable or calculable parameters exist to monitor the system, including facility performance; (2) Objective criteria to assess performance are established based on risk insights, deterministic analyses, and/ or performance history; (3) Plant operators have the flexibility to determine how to meet established performance criteria in ways that will encourage and reward improved outcomes; and (4) A framework exists in which the failure to meet a performance criteria, while undesirable, will not in and of itself constitute or result in an immediate safety concern.

**Pinch Point.** A plant location containing a configuration of cables and equipment that in the event of fire could result in the loss of all success paths for one or more evaluated Key Safety Functions (KSFs) during plant shutdown. KSFs include Decay Heat Removal, Inventory Control, Power Availability and others.

**Power Block.** Structures that have equipment required for nuclear plant operations.

**Primary Control Station.** A designed station to facilitate plant control outside of the Control Room.

**Probabilistic Safety Assessment (PSA).** A comprehensive evaluation of the risk of a facility or process; also referred to as a probabilistic risk assessment (PRA).

**Radiant Energy Shield.** A device utilized to protect components from the effects of radiant heat generated by a fire.

**Recovery Action.** Activities to achieve the nuclear safety performance criteria that take place outside of the main control room or outside of the primary control station(s) for the equipment being operated, including the replacement or modification of components.

**Reliability.** The probability that the system, structure, or component of interest will function without failure for a given interval of time or number of cycles. For standby systems, structures, or components, this includes the probability of success upon demand.

**Request for Additional Information (RAI).** NRC process associated with formal licensing actions (e.g., License Amendment Request) to obtain additional information from licensee.

**Risk.** The set of probabilities and consequences for all possible accident scenarios associated with a given plant or process.

**Risk Informed Approach.** A philosophy whereby risk insights are considered together with other factors to establish performance requirements that better focus attention on design and operational issues commensurate with their importance to public health and safety.

**Safe and Stable Conditions.** For fuel in the reactor vessel, head on and tensioned, safe and stable conditions are defined as the ability to maintain  $K_{eff} < 0.99$ , with a reactor coolant temperature at or below the requirements for hot shut down for a boiling water reactor and hot standby for a pressurized water reactor. For all other configurations, safe and stable conditions are defined as maintaining  $K_{eff} < 0.99$  and fuel coolant temperature below boiling.

**Shall.** Indicates a mandatory requirement.

**Site.** Refers to the contiguous property that makes up a nuclear power plant facility. This would include areas both inside the protected area and the owner-controlled property.

**Should.** Indicates a recommendation or that which is advised but not required.

**Source Term Limitation.** Limiting the source of radiation available for release.

**Spurious Operation.** An unwanted change in state of equipment due to fire-induced faults (e.g., hot shorts, open circuits, or shorts to ground) on its power or control circuitry.

**Through Penetration Fire Stop.** A tested, fire-rated construction consisting of the materials that fill the openings through the wall or floor opening around penetrating items such as cables, cable trays, conduits, ducts, and pipes and their means of support to prevent the spread of fire.

### 3.2 Plant Definitions

**ArcPlus™.** Trademarked software that provides a graphical user interface to support the analysis of fire scenario-based safe and stable or safe shutdown compliance. The software links to existing safe shutdown databases and cable and raceway databases to support the Nuclear Safety Capability Assessment for power and non-power modes. The software is a controlled QA database and contains the source data and enables printing of the Appendices C, D and F of this document.

**Safe and Stable.** Following the reactor trip, the plant will be placed in a known safe and stable condition, hot standby. In hot standby, a natural circulation cooldown resulting from a loss of offsite power will be initiated to transition to the next safe and stable mode of hot shutdown. Assuming complete loss of offsite power is regarded as the most conservative method and limits the scope of analysis to those SSCs powered from the diesel generators and batteries. At this point in time, the analysis for safe and stable in non-power operational modes also begins and is enveloped by the cooldown from at power. Emergency feedwater operation continues and steam is released from one or more steam generators to remove decay heat. Charging continues to account for the RCS shrinkage and expected losses and utilizes borated water to maintain reactivity shutdown margins. Pressure is reduced via operation of the pressurizer auxiliary spray valve or the pressurizer Power Operated Relief Valves (PORVs).

When plant temperature is less than approximately 350°F and pressure is less than approximately 425 psig, the Residual Heat Removal (RHR) system will be placed in service. The plant will continue to cool down as the component cooling water system transfers heat to the service water system. In this manner, plant temperature will be reduced below 200° F and cold shutdown.

Depending upon the location and extent of the fire, the unit may be maintained in any one of the safe and stable modes described above for an extended period of time until the readiness of the systems necessary for the next safe and stable mode on the cooldown timeline can be verified to be operational. The ability to maintain safe and stable conditions at a particular mode for extended periods (generally regarded as greater than 24 hours) may require additional actions such as replenishment of diesel fuel oil, replenishment of borated injection water, or replenishment of condensate supplies and can be performed by the Site's Emergency Response Organization.

**Pre-Fire Plans.** Documents that detail each fire area configuration and fire hazards to be encountered in the fire area, along with any nuclear safety components and fire protection systems and features that are present. Pre-Fire Plans are available and shall be utilized by the Fire Brigade for all areas in which a fire could jeopardize the ability to meet the performance criteria of NFPA 805.



## 4.0 DESIGN BASIS

### 4.1 NFPA 805 Methodology

#### 4.1.1 Compliance Requirements

The general approach for compliance with NFPA 805 is outlined in Chapter 2 and consists of the following steps (See Figure 4-1):

- “(a) Establish the fundamental fire protection program (see NFPA 805 Chapter 3).*
- (b) Identify fire areas and associated fire hazards.*
- (c) Identify the performance criteria that apply to each fire area (see NFPA 805 Section 1.5).*
- (d) Identify systems, structures, and components (SSCs) in each fire area to which the performance criteria apply.*
- (e) Select the deterministic and/or performance-based approach for the performance criteria (see NFPA 805 Chapter 4).*
- (f) When applying a deterministic approach, demonstrate compliance with the deterministic requirements (see NFPA 805 Chapter 4).*
- (g) When applying a performance-based approach, perform engineering analyses to demonstrate that performance based requirements are satisfied. These analyses shall include, for example, engineering evaluations, probabilistic safety assessments, or fire modeling calculations (see NFPA 805 Section 2.4).”*

In addition to the analyses performed to demonstrate compliance with 10 CFR 50.48 (a) and (c), the following are also required for fire protection program maintenance:

- “(h) Perform the plant change evaluation that demonstrates that changes in risk, defense-in-depth, and safety margins are acceptable (see NFPA 805 2.4.4). If any one of these is unacceptable, additional fire protection features or other alternatives shall be implemented.*
- (i) Develop a monitoring program to monitor plant performance as it applies to fire risk. This program shall provide feedback for adjusting the fire protection program, as necessary (see NFPA 805 Section 2.6).*
- (j) For the resulting plant fire protection program, provide adequate documentation, ensure the quality of the analyses, and maintain configuration control of the resulting plant design and operation (see NFPA 805 Section 2.7).”*

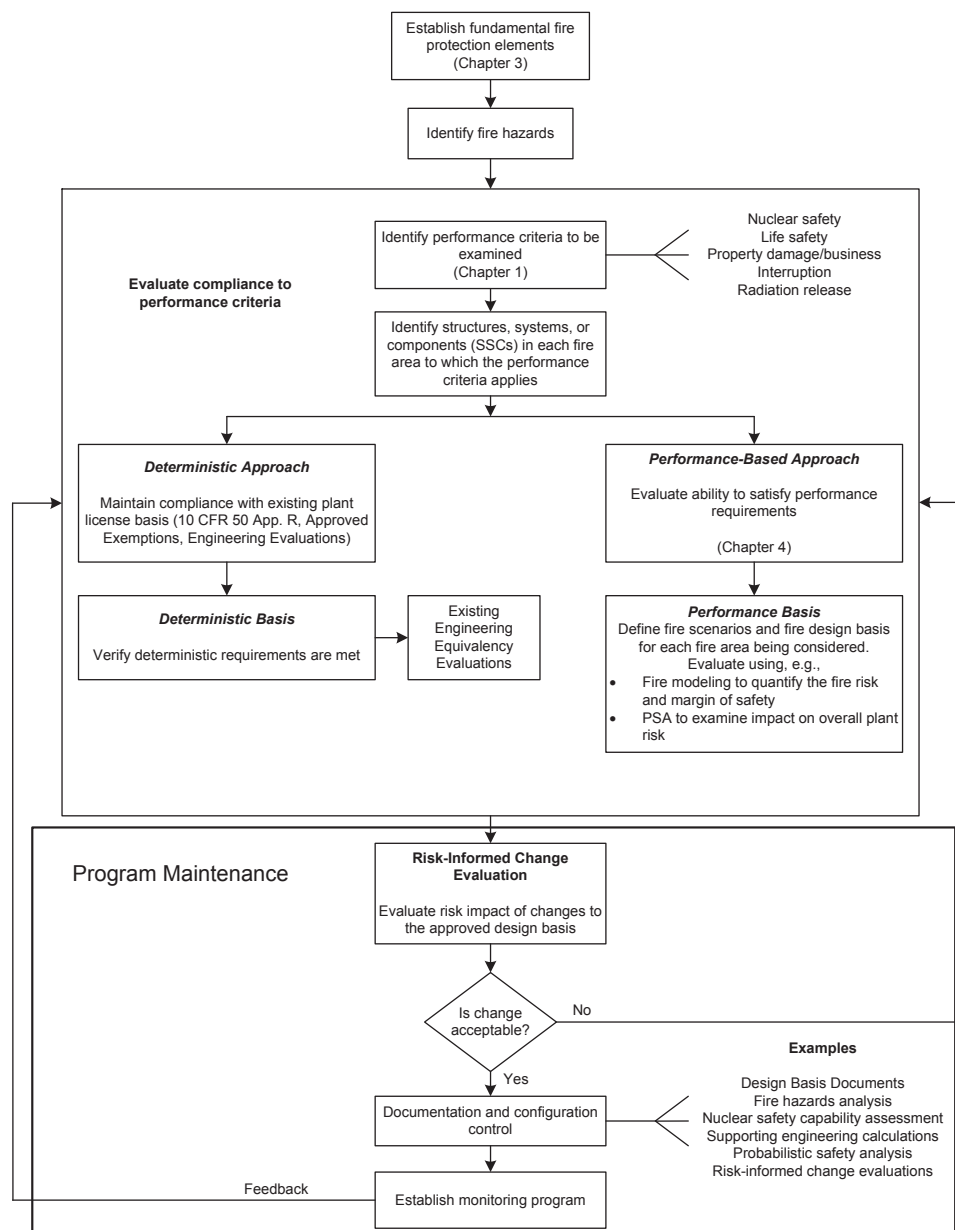


Figure 4-1 NFPA 805 Process [Based on Figure 2-2 of NFPA 805]<sup>1</sup>

#### 4.1.2 FNP Results

As used in NFPA 805 Chapter 3, the terms ‘Power Block’ and ‘Plant’ refer to structures that contain equipment required for nuclear plant operations. All structures within the Farley Nuclear Plant Owner Controlled Area were reviewed to determine the potential impact of fire on the nuclear safety and radioactive release criteria described in Section 1.5 of NFPA 805.

<sup>1</sup> 10 CFR 50.48(c) does not endorse Life Safety and Plant Damage/Business Interruption goals, objectives and criteria. See 10 CFR 50.48 (c) for specific exceptions to the endorsement of NFPA 805.

This was accomplished by identifying the structures that contain either:

- Equipment that could affect:
  - Plant operation for power generation
  - Equipment important to safety
  - Ability to maintain nuclear safety performance criteria in the event of a fire

OR

- Radioactive materials that could potentially be released in event of a fire.

This Power Block review is documented in SNC calculation SM-C051326701-008. The Farley Nuclear Plant Power Block, Fire Areas and Fire Zones are listed in Appendix B.

The initial review of the Nuclear Safety Capability Assessment (NSCA) methodology described in NFPA 805 Chapter 2 was performed to ensure compliance and was documented in SNC calculation SE-C051326701-006. This calculation is now a historical document. The methodology comparison is now maintained in the ArcPlus™ database and a copy is provided in Appendix C.

#### 4.1.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) dated March 10, 2015 (Section 3.2.1.6):

*“The NRC staff reviewed the documentation provided by the licensee describing the process used to perform the NSCA required by NFPA 805, Section 2.4.2. The licensee performed this evaluation by comparing the SSA against the NFPA 805 NSCA requirements using NEI 00-01, Revision 1, and also conducted a gap analysis between Revisions 1 and 2 of NEI 00-01 to determine if any discrepancies existed.”*

*“Based on the information provided in the licensee’s submittal, as supplemented, the NRC staff accepts the method the licensee used to perform the NSCA with respect to the selection of systems and equipment, selection of cables, and identification of the location of nuclear safety equipment and cables, as required by NFPA 805, section 2.4.2.”*

#### 4.1.4 Ongoing Compliance Maintenance

Changes to the Power Block definition or NSCA methodology would be processed as an engineering change to calculation SM-C051326701-008 or the ArcPlus™ database, respectively. Each change would also undergo a Fire Protection Program change evaluation in accordance with NMP-ES-035-006, Fire Protection Program Impact Screening and Detailed Reviews, to ensure continued compliance with the fire protection licensing basis and determine if NRC approval was required prior to implementation of the change.

## 4.2 Fundamental Fire Protection Program and Design Elements

### 4.2.1 Compliance Requirements

The Fundamental Fire Protection Program and Design Elements are established in Chapter 3 of NFPA 805. Section 4.3.1 of NEI 04-02 provided a systematic process for determining the extent to which the Current License Basis and plant configuration meet these criteria and for identifying the Fire Protection Program (FPP) changes that would be necessary for compliance with NFPA 805. NEI 04-02 Appendix B-1 provides guidance for documenting the comparison of the Fire Protection Program requirements of NFPA 805 Chapter 3 to the FNP Fire Protection Program.

Each section/subsection of NFPA 805 Chapter 3 was reviewed against the then-existing FNP FPP (pre-transition) to determine that FNP achieved compliance in one of the following manners by demonstrating the existing FPP element:

- Directly complies with the requirement. (Complies)
- Complies through the use of an explanation or clarification. (Complies with Clarification)
- Complies through the use of EEEEs whose bases remained valid and are of sufficient quality. (Complies via Engineering Evaluation)
- Complies with the requirement based on prior NRC approval of an alternative to the fundamental FPP attribute and the bases remain valid. (Complies via Previous NRC Approval)
- Did not comply with the requirement but licensee requested specific approval for a performance-based (PB) method. (Submit for NRC Approval)

### 4.2.2 FNP Results

The comparison of the FNP FPP to NFPA 805 Chapter 3 was originally documented in calculation SM-C051326701-003, NFPA 805 Transition – B-1 Table Calculation. This calculation is now a historical document. The comparison is now maintained in the ArcPlus™ database and a copy is provided in Appendix D.

#### 4.2.2.1 Code Compliance Evaluations

Code compliance evaluations were conducted and documented for the following associated Chapter 3 sections/subsections in calculations SM-C051326701-007, NFPA 805 – NFPA Code Compliance Review, and SM-C051326701-001, NFPA 600 Code Compliance Review.

Summarized below is the NFPA 805 section that identifies the fire protection element, the related NFPA code, if the code is a Farley commitment and if so, the code of record (year) as documented in SM-C051326701-007:

- 3.3.1.2 (5) Controls on use and storage of flammable and combustible liquids – NFPA 30, Flammable and Combustible Liquids Code. Farley Commitment – Yes. Code of Record – 1972.
- 3.3.1.3.1 Hot work safety procedure – NFPA 51B, Standard for Fire Prevention During Welding, Cutting, and Other Hot Work. Farley Commitment – Yes. Code of Record – 2003.
- 3.3.7.1 Bulk flammable gas storage – NFPA 55, Storage, Use and Handling of Compressed Gases and Cryogenic Fluids. Farley Commitment – Yes. Code of Record – 2005.
- 3.4.1(a)(1) On-site firefighting capability – NFPA 600, Standard on Industrial Fire Brigades. Farley Commitment – Yes. Code of Record – 2005.

- 3.5.2 Water supply tank requirements – NFPA 22, Water Tanks for Private Fire Protection. Farley Commitment – Yes. Code of Record – 1970.
- 3.5.3 Water supply pump requirements – NFPA 20, Stationary Pumps for Fire Protection. Farley Commitment – Yes. Code of Record – 1974.
- 3.5.10 Water supply yard main requirements – NFPA 24, Private Fire Service Mains. Farley Commitment – Yes. Code of Record - 1973
- 3.6.1 Standpipe and hose station requirements – NFPA 14, Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems. Farley Commitment – Yes. Code of Record – 1976.
- 3.7 Fire extinguishers – NFPA 10, Standard for Portable Fire Extinguishers. Farley Commitment – Yes. Code of Record – 1973.
- 3.8.1 Fire alarm – NFPA 72, National Fire Alarm Code. Modification to upgrade the system Code of Record - 2007
- 3.9.1 Fire suppression system requirements – NFPA 13, Standard for the Installation of Sprinkler Systems; NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection. Farley Commitment – Yes. Code of Record – 1975 for all but pre-action sprinklers in the power block have code year 1976.
- 3.10.1 Gaseous suppression system requirements – NFPA 12, Standard on Carbon Dioxide Extinguishing Systems; NFPA 12A, Standard of Halon 1301 Fire Extinguishing Systems. Farley Commitment – Yes. Code of Record – 1973.
- 3.11.3(1) Fire barrier penetrations – NFPA 80, Standard for Fire Doors and Fire Windows. Farley Commitment – Yes. Code of Record – 1973.
- 3.11.3(2) Fire barrier penetrations – NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilating Systems. Farley Commitment – Yes. Code of Record – 1974.

#### 4.2.2.2 Engineering Evaluations of NFPA 805 Chapter 3 Items

Compliance through Engineering Evaluations (separate from Code Compliance Evaluations) and NRC Previously Approved Variations of Chapter 3 sections/subsections are as follows:

- 3.6.4 Standpipe and hose station earthquake provisions – FNP is not required to have seismically qualified standpipes and hose stations because its construction permit date meets the NRC exemption for this requirement.
- 3.11.1 Building separation – A formal Engineering Evaluation was performed to ensure adequate compliance for building fire separation. (Calculation SM-C051326701-006, Identify Regulatory Fire Barriers)
- 3.11.2 Fire barriers – A calculation was performed that identifies all regulatory fire barriers and defines their physical boundaries. (Calculation SM-C051326701-006, Identify Regulatory Fire Barriers)
- 3.11.4 (a) Through Penetration Fire Stops – Penetration seal assemblies that vary from existing seal details and specifications and that can be justified through engineering analysis are acceptable for installation. (Calculation SM-C051326701-006, Identify Regulatory Fire Barriers)

#### 4.2.2.3 Submitted for NRC Approval

Requirements that did not comply but that were submitted for NRC Approval are as follows with section/subsection number listed first:

- 3.3.5.1 – Requested the use of PB methods to demonstrate an equivalent level of fire protection for existing wiring above suspended ceilings that may not be plenum rated or routed in armored cable, metallic conduit or cable trays with solid metal top and bottom covers.
- 3.3.5.2 – Requested the use of plastic embedded conduit installations versus metal conduit.
- 3.3.12(1) – Requested that oil misting not be included in the scope of lubricating oil collection systems for reactor coolant pumps.
- 3.5.15 – Requested the use of PB methods to demonstrate an equivalent level of fire protection for hydrant spacing that does not meet specified criteria.
- 3.5.16 – Requested approval for use of fire protection system water for plant evolutions other than fire protection.

The information was originally documented in calculation SM-C051326701-003 and included references to the document(s) that justify these positions. This calculation is now a historical document. The comparisons and justification references are now maintained in the ArcPlus™ database and a copy is provided in Appendix D.

#### 4.2.3 NRC Acceptance

The NRC staff concluded in their March 10, 2015 Safety Evaluation (Section 3.1.1.8) that the fundamental fire protection program elements and minimum design requirements of NFPA 805, as modified by 10 CFR 50.48(c)(2) are acceptable.

#### 4.2.4 Ongoing Compliance Maintenance

Changes to the fundamental fire protection program elements and design requirements comparison, code compliance reviews, or engineering evaluations would be processed as an engineering change to the ArcPlus™ database, or calculations SM-C051326701-007, SM-C051326701-001, or SM-C051326701-006, respectively. Each change would also undergo a Fire Protection Program change evaluation in accordance with NMP-ES-035-006, Fire Protection Program Impact Screening and Detailed Reviews, to ensure continued compliance with the fire protection licensing basis and determine if NRC approval was required prior to implementation of the change.

### 4.3 Nuclear Safety Performance Criteria (NSPC)

#### 4.3.1 Compliance Requirements

NFPA 805 is a risk-informed/performance-based (RI/PB) standard that allows engineering analyses to be used to show that FPP features and systems provide sufficient capability to meet the requirements of 10 CFR 50.48(c).

NFPA 805, Section 2.4, "Engineering Analyses," states that:

*"Engineering analysis is an acceptable means of evaluating a fire protection program against performance criteria. Engineering analyses shall be permitted to be qualitative or quantitative in accordance with Figure 2.4 [of NFPA 805]."*

*The effectiveness of the fire protection features shall be evaluated in relation to their ability to detect, control, suppress, and extinguish a fire and provide passive protection to achieve*



*the performance criteria and not exceed the damage threshold defined in Section [2.5] for the plant area being analyzed."*

Chapter 1 of the standard defines the goals, objectives and performance criteria that the FPP must meet in order to be in accordance with NFPA 805. NFPA 805, Section 1.3.1 "Nuclear Safety Goal," states that:

*"The nuclear safety goal is to provide reasonable assurance that a fire during any operational mode and plant configuration will not prevent the plant from achieving and maintaining the fuel in a safe and stable condition."*

NFPA 805, Section 1.4.1 "Nuclear Safety Objectives," states that:

*"In the event of a fire during any operational mode and plant configuration, the plant shall be as follows:*

- 1) Reactivity Control. Capable of rapidly achieving and maintaining subcritical conditions;*
- 2) Fuel Cooling. Capable of achieving and maintaining decay heat removal and inventory control functions; and*
- 3) Fission Product Boundary. Capable of preventing fuel clad damage so that the primary containment boundary is not challenged."*

These high level safety objectives are used to establish the design requirements of the FPP, including more detailed Nuclear Safety Performance Criteria (NSPC) and the method utilized for applying the performance criteria, the Nuclear Safety Capability Assessment (NSCA).

NFPA 805, Section 1.5.1 "Nuclear Safety Performance Criteria," states that:

*"Fire protection features shall be capable of providing reasonable assurance that, in the event of a fire, the plant is not placed in an unrecoverable condition. To demonstrate this, the following performance criteria shall be met.*

- a) Reactivity Control. Reactivity control shall be capable of inserting negative reactivity to achieve and maintain subcritical conditions. Negative reactivity inserting shall occur rapidly enough such that fuel design limits are not exceeded;*
- b) Inventory and Pressure Control. With fuel in the reactor vessel, head on and tensioned, inventory and pressure control shall be capable of controlling coolant level such that sub-cooling is maintained for a PWR and shall be capable of maintaining or rapidly restoring reactor water level above top of active fuel for a BWR such that fuel clad damage as a result of a fire is prevented;*
- c) Decay Heat Removal. Decay heat removal shall be capable of removing sufficient heat from the reactor core or spent fuel such that fuel is maintained in a safe and stable condition;*
- d) Vital Auxiliaries. Vital auxiliaries shall be capable of providing the necessary auxiliary support equipment and systems to assure that the systems required under (a), (b); (c), and (e) are capable of performing their required nuclear safety function; and*
- e) Process Monitoring. Process monitoring shall be capable of providing the necessary indication to assure the criteria addressed in (a) through (d) have been achieved and are being maintained."*

### 4.3.2 FNP Results

The NSPC were achieved through deterministic approaches (NFPA 805 Section 4.2.3, including engineering evaluations and previously approved licensing actions) and performance-based approaches. In cases where neither approach could meet the NSPC, a modification to the plant design was required.

Table 4-1 lists the documented calculations completed to verify achievement of the NSPC for each fire area at Farley Nuclear Plant. The current information is housed in the active calculations listed on the table and in the ARCPlus™ database for those calculations listed as historical. Appendix F provides an informational use summary of the results of this review and summarizes how the NSPC is met for each analyzed fire area.

**Table 4-1: Nuclear Safety Calculations**

Calculation No.	Title
SNC Calculation SE-C051326701-001	Circuit Analysis Calculation for Safe Shutdown/Fire PRA Equipment for Farley
SNC Calculation SE-C051326701-002	FNP Associated Circuits Analysis: Common Power Supply and Common Enclosure
SNC Calculation SE-C051326701-003	FNP NSEL and Safe and Stable Fault Trees
SNC Calculation SE-C051326701-005	FNP Units 1 and 2 NFPA 805 Non-Power Operation Review
SNC Calculation SE-C051326701-006*	Table B-2 Nuclear Safety Capability Assessment Methodology Review
SNC Calculation SE-C051326701-010*	NFPA 805 NSCA Transition – Table B-3 – Fire Area Review
SNC Calculation SE-C051326701-011	FNP Recovery Action Feasibility Evaluation
SNC Calculation SE-C051326701-012	NFPA 805 Defense in Depth (DID) Recovery Actions
SNC Calculation SM-C051326701-002*	NFPA 805 Engineering Equivalency Evaluation Calculation
SNC Calculation SM-C051326701-004*	NFPA 805 Transition Licensing Action Review
SNC Calculation SM-C051326701-006	Identify Regulatory Fire Barriers
SNC Calculation SM-C051326701-007	NFPA Code Compliance review
SNC Calculation SM-C051326701-008	Definition of Power Block
SNC Calculation SM-C051326701-010	NFPA 805 Radiological Release Calculation
SNC Calculation SM-C051326701-011	Fire Suppression Effects Analysis
SNC Calculation SM-C051326701-012*	Required Systems and Features

\* Historical calculation

#### 4.3.2.1 Multiple Spurious Operations (MSO) Overview

NFPA 805 Section 2.4.2.2.1, "Circuits Required in Nuclear Safety Functions," states, in part, that:

*"Circuits required for the nuclear safety functions shall be identified. This includes circuits that are required for operation, that could prevent the operation, or that result in the maloperation of the equipment identified in 2.4.2.1. Nuclear Safety Capability Systems and Equipment Selection. This evaluation shall consider fire-induced failure modes such as hot shorts*



*(external and internal), open circuits, and shorts to ground, to identify circuits that are required to support the proper operation of components required to achieve the nuclear safety performance criteria, including spurious operation and signals.”*

In addition, NFPA 805, Section 2.4.3.2, states that:

*“The PSA evaluation shall address the risk contribution associated with all potentially risk-significant fire scenarios”*

Because the risk-informed/performance-based approach utilized Fire Risk Evaluations (FRE) in accordance with NFPA 805 Section 4.2.4.2, "Use of Fire Risk Evaluation," adequately identifying and including potential multiple spurious operation (MSO) combinations was accomplished to ensure that all potentially risk-significant fire scenarios were evaluated.

#### **4.3.2.2 MSO Methodology**

The review and evaluation process to determine susceptibility to fire-induced MSOs was conducted in accordance with NEI 04-02 and RG 1.205, as supplemented by FAQ 07-0038. The approach uses insights from the Fire PRA and consists of the following:

- a) Identifying potential MSOs of concern
- b) Conducting an expert panel to assess plant specific vulnerabilities (e.g., per NEI 00-01, Revision 1 Section F.4.2)
- c) Updating the Fire PRA model and new NSCA to include the MSOs of concern
- d) Evaluating for NFPA 805 compliance
- e) Documenting results

MSOs identified previously were incorporated in the Fire PRA model and evaluated for inclusion in the NSCA. Where MSO combinations did not meet the deterministic requirements of NFPA 805, they were addressed using the PB approach of NFPA 805, Section 4.2.4. Based on the evaluations, components associated with MSOs were added to the NSCA equipment list and logics and cable tracing and circuit analysis was performed. Additionally, the Fire PRA quantified the fire-induced risk model containing the MSO pathways and the MSO contribution was included in the Fire PRA results.

#### **4.3.2.3 At-Power Considerations**

NFPA 805 Section 2.4.2 requires:

*“The purpose of this section is to define the methodology for performing a nuclear safety capability assessment. The following steps shall be performed:*

- a. Selection of systems and equipment and their interrelationships necessary to achieve the nuclear safety performance criteria in Chapter 1*
- b. Selection of cables necessary to achieve the nuclear safety performance criteria in Chapter 1*
- c. Identification of the location of nuclear safety equipment and cables*
- d. Assessment of the ability to achieve the nuclear safety performance criteria given a fire in each fire area*

*Steps 1 through 4 shall be performed to determine equipment and cables that shall be evaluated using either the deterministic or performance-based method in Chapter 4.”*

The NSCA methodology review evaluated the (pre-transition) post-fire Safe Shutdown Analysis (SSA) methodology against the guidance provided in NEI 00-01, Revision 1, Chapter 3, Deterministic Methodology, as discussed in Appendix B-2 of NEI 04-02.

This comparison was documented in LAR Table B-2, and the current information is housed in the calculation SE-C0513026701-006. The nuclear safety goals, objectives and performance criteria of NFPA 805 allow more flexibility than the previous deterministic programs based on 10 CFR 50, Appendix R and NUREG 0800, Section 9.5-1 (and NEI 00-01, Chapter 3). NFPA 805 only requires the licensee to maintain the fuel in a safe and stable condition rather than achieve and maintain cold shutdown.

NFPA 805, Section 1.6.56, defines Safe and Stable conditions as follows:

*“For fuel in the reactor vessel, head on and tensioned, safe and stable conditions are defined as the ability to maintain  $K_{eff} < 0.99$ , with a reactor coolant temperature at or below the requirements for hot shutdown for a boiling water reactor and hot standby for a pressurized water reactor. For all other configurations, safe and stable conditions are defined as maintaining  $K_{eff} < 0.99$  and fuel coolant temperature below boiling.”*

The nuclear safety goal of NFPA 805 requires “...reasonable assurance that a fire during any operational mode and plant configuration will not prevent the plant from achieving and maintaining the fuel in a safe and stable condition” without a specific reference to a mission time or event coping duration.

For the plant to be in a safe and stable condition, it may not be necessary to perform a transition to cold shutdown as previously required under 10 CFR 50, Appendix R. Therefore, the unit may remain at or below the temperature defined by a hot standby plant operating state for the event.

The NSCA results were documented in SNC Calculation SE-C051326701-010, NFPA 805 NSCA Transition – Table B-3 – Fire Area Review. The review documents for each Fire Area:

- Whether a deterministic or performance-based approach was utilized in accordance with NFPA 805 Sections 4.2.3 or 4.2.4, respectively;
- Methods of Accomplishment to meet the various Nuclear Safety Performance Goals;
- Fire Protection Systems and Features required to meet the NSPC;
- An evaluation of the effects of fire suppression activities on the ability to achieve the NSPC; and
- Acceptability of Engineering Equivalency Evaluations.

This original Table B-3 calculation along with calculations SE-C051326701-004 and SE-C051326701-008 were developed for the LAR and have since been made historical. In the case of SNC Calculation SE-C051326701-010, the title has been revised to, “Nuclear Safety Capability Assessment - Fire Area Compliance Assessment,” And reflects current compliance as discussed below.

#### **4.3.3 NRC Acceptance**

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c), dated March 10, 2015 (Section 3.2.6):

*'The NRC staff reviewed the licensee's LAR, as supplemented, for conformity with the requirements contained in NFPA 805, Section 2.4.2, regarding the process used to perform the NSCA. The NRC staff concluded that the declared safe and stable condition proposed was acceptable because the licensee's analysis process adequately and appropriately identified and located the systems, equipment, and cables, required to provide reasonable assurance of achieving and maintaining the fuel in a safe and stable condition, as well as to meet the NFPA 805 NSPC.'*

*In accordance with 10 CFR 50.48(c)(2)(iii), the NRC staff confirmed, through review of the documentation provided in the LAR, that feed and bleed was not the sole fire-protected SSD path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability.*

*The NRC staff also reviewed the licensee's process to identify and analyze MSOs. Based on the LAR, as supplemented, the process used to identify and analyze MSOs is considered comprehensive and thorough. Through the use of an expert panel process, in accordance with the guidance of RG 1.205, NEI 04-02, and FAQ 07-0038, potential MSO combinations were identified and included as necessary in the NSCA, as well as the applicable FREs. The NRC staff also considers the approach the licensee uses for assessing the potential for MSO combinations acceptable, because it was performed in accordance with NRC endorsed guidance.'*

#### 4.3.4 Ongoing Compliance Maintenance

Table 4-1 above lists the documented calculations completed to verify achievement of the NSPC for each fire area at Farley Nuclear Plant. The current information is housed in the active calculations from the Table and the calculation information in the ARCPlus™ database. Appendix F provides an informational use summary of the results of this review and summarizes how the NSPC is met for each analyzed fire area.

Table 4-2 below summarizes how the NSPC is met for each analyzed fire area with respect to general Safe Shutdown (SSD) path credited and whether the area complies deterministically or requires application of risk-informed, performance-based methods to demonstrate compliance.

**Table 4-2 Fire Area Compliance**

Fire Area-Unit Affected		Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
044-U1	CR COMPLEX & TSC		4.2.4.2
044-U2	CR COMPLEX & TSC		4.2.4.2
051-U1	CR HVAC EQ RMS		4.2.4.2
051-U2	CR HVAC EQ RMS		4.2.4.2
056A-U1	DG BLDG SWGR RM TN A		4.2.4.2
056A-U2	DG BLDG SWGR RM TN A		4.2.4.2
056B-U1	DG BLDG SWGR RM TN B & FOYER		4.2.4.2
056B-U2	DG BLDG SWGR RM TN B & FOYER		4.2.4.2

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected		Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
057-U1	DG RM 2C		4.2.4.2
057-U2	DG RM 2C		4.2.4.2
058-U1	DG RM 1B		4.2.4.2
058-U2	DG RM 1B		4.2.4.2
059-U1	DG RM 2B		4.2.4.2
059-U2	DG RM 2B		4.2.4.2
060-U1	DG RM 1C		4.2.4.2
060-U2	DG RM 1C		4.2.4.2
061-U1	DG RM 1-2A		4.2.4.2
061-U2	DG RM 1-2A		4.2.4.2
062-U1	DAY FUEL TK RM 2C		4.2.3
062-U2	DAY FUEL TK RM 2C		4.2.3
063-U1	DAY FUEL TK RM 1B		4.2.3
063-U2	DAY FUEL TK RM 1B		4.2.3
064-U1	DAY FUEL TK RM 2B		4.2.3
064-U2	DAY FUEL TK RM 2B		4.2.3
065-U1	DAY FUEL TK RM 1C		4.2.3
065-U2	DAY FUEL TK RM 1C		4.2.3
066-U1	DAY FUEL TK RM 1-2A		4.2.3
066-U2	DAY FUEL TK RM 1-2A		4.2.3
067-U1	RWIS PMP RM B		4.2.3
067-U2	RWIS PMP RM B		4.2.3
068-U1	RWIS PMP RM A		4.2.3
068-U2	RWIS PMP RM A		4.2.3
069-U1	RWIS SWGR RM TN B		4.2.3
069-U2	RWIS SWGR RM TN B		4.2.3
070-U1	RWIS SWGR RM TN A		4.2.4.2
070-U2	RWIS SWGR RM TN A		4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
071-U1	DG BLDG CORRIDOR	4.2.3
071-U2	DG BLDG CORRIDOR	4.2.3
072-U1	SVC WATER PMP RM	4.2.4.2
072-U2	SVC WATER PMP RM	4.2.4.2
073-U1	SWIS BATT RM TN B	4.2.3
073-U2	SWIS BATT RM TN B	4.2.3
074-U1	SWIS BATT RM TN A	4.2.3
074-U2	SWIS BATT RM TN A	4.2.3
075-U1	SWIS 5kV SWGR RM B & WEST STAIRS	4.2.4.2
075-U2	SWIS 5kV SWGR RM B & WEST STAIRS	4.2.4.2
076-U1	SWIS 5kV SWGR RM A & EAST STAIRS	4.2.4.2
076-U2	SWIS 5kV SWGR RM A & EAST STAIRS	4.2.4.2
093-U1	AUX BLDG	4.2.3
093-U2	AUX BLDG	4.2.3
1-001-U1	AUX BLDG	4.2.4.2
1-001-U2	AUX BLDG	4.2.3
1-004-U1	AUX BLDG	4.2.4.2
1-004-U2	AUX BLDG	4.2.4.2
1-005-U1	AUX BLDG	4.2.4.2
1-005-U2	AUX BLDG	4.2.3
1-006-U1	AUX BLDG	4.2.4.2
1-006-U2	AUX BLDG	4.2.3
1-008-U1	AUX BLDG CBL CHASE, RM 116	4.2.4.2
1-008-U2	AUX BLDG CBL CHASE, RM 116	4.2.4.2
1-009-U1	AUX BLDG CBL CHASE, RMS 117 & 246	4.2.4.2
1-009-U2	AUX BLDG CBL CHASE, RMS 117 & 246	4.2.4.2
1-012-U1	HLWAY & LOCAL HOT SHTDWN PNL RM	4.2.4.2
1-012-U2	HLWAY & LOCAL HOT SHTDWN PNL RM	4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
1-013-U1	AUX BLDG CBL CHASE RMS 227, 300, 465, 466 & 500	4.2.4.2
1-013-U2	AUX BLDG CBL CHASE RMS 227, 300, 465, 466 & 500	4.2.4.2
1-014-U1	COMPTR RM and DUCT CHASE	4.2.4.2
1-014-U2	COMPTR RM and DUCT CHASE	4.2.3
1-015-U1	COMMUNICATION RM	4.2.4.2
1-015-U2	COMMUNICATION RM	4.2.3
1-016-U1	AUX BLDG BATT RM	4.2.4.2
1-016-U2	AUX BLDG BATT RM	4.2.3
1-017-U1	AUX BLDG BATT RM	4.2.4.2
1-017-U2	AUX BLDG BATT RM	4.2.3
1-018-U1	AUX BLDG DC SWGR RM	4.2.4.2
1-018-U2	AUX BLDG DC SWGR RM	4.2.3
1-019-U1	AUX BLDG DC SWGR RM	4.2.4.2
1-019-U2	AUX BLDG DC SWGR RM	4.2.3
1-020-U1	AUX BLDG	4.2.4.2
1-020-U2	AUX BLDG	4.2.3
1-021-U1	AUX BLDG SWGR RMS	4.2.4.2
1-021-U2	AUX BLDG SWGR RMS	4.2.4.2
1-023-U1	AUX BLDG SWGR RM	4.2.4.2
1-023-U2	AUX BLDG SWGR RM	4.2.4.2
1-030-U1	AUX BLDG CABL CHASE RMS 249 & 252	4.2.4.2
1-030-U2	AUX BLDG CABL CHASE RMS 249 & 252	4.2.4.2
1-031-U1	AUX BLDG CABL CHASE RMS 250 & 251	4.2.4.2
1-031-U2	AUX BLDG CABL CHASE RMS 250 & 251	4.2.4.2
1-034-U1	TN B ELEC PEN RM & FIL SYS	4.2.4.2
1-034-U2	TN B ELEC PEN RM & FIL SYS	4.2.3
1-035-U1	TN A ELEC PEN RMS	4.2.4.2
1-035-U2	TN A ELEC PEN RMS	4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
1-039-U1	FUEL STRG & STRG RACK PITS	4.2.4.2
1-039-U2	FUEL STRG & STRG RACK PITS	4.2.3
1-040-U1	CABLE SPREADING RM	4.2.4.2
1-040-U2	CABLE SPREADING RM	4.2.4.2
1-041-U1	TN A SWGR & LOAD CTR RMS	4.2.4.2
1-041-U2	TN A SWGR & LOAD CTR RMS	4.2.4.2
1-042-U1	AUX BLDG HLWAYS & COORIDOR	4.2.4.2
1-042-U2	AUX BLDG HLWAYS & COORIDOR	4.2.4.2
1-053-U1	AUX BLDG ELEV MACH RM NO 2	4.2.3
1-053-U2	AUX BLDG ELEV MACH RM NO 2	4.2.3
1-054-U1	AUX BLDG ELEV MACH RM NO 1 and ELEV NO 1	4.2.4.2
1-054-U2	AUX BLDG ELEV MACH RM NO 1 and ELEV NO 1	4.2.3
1-055-U1	CONTAINMENT	4.2.4.2
1-055-U2	CONTAINMENT	4.2.3
1-075-U1	U1 CABLE TUNNEL TN A	4.2.4.2
1-075-U2	U1 CABLE TUNNEL TN A	4.2.4.2
1-076-U1	U1 CABLE TUNNEL TN B	4.2.4.2
1-076-U2	U1 CABLE TUNNEL TN B	4.2.4.2
1-077-U1	COND STRG TK	4.2.3
1-077-U2	COND STRG TK	4.2.3
1-078-U1	RX MAKEUP STRG TK	4.2.3
1-078-U2	RX MAKEUP STRG TK	4.2.3
1-079-U1	REFUEL WTR STRG TK	4.2.4.2
1-079-U2	REFUEL WTR STRG TK	4.2.3
1-080-U1	LOW VLTG SWYD U1	4.2.3
1-080-U2	LOW VLTG SWYD U1	4.2.3
1-081-U1	TURB BLDG BATT RM	4.2.4.2
1-081-U2	TURB BLDG BATT RM	4.2.4.2

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
1-082-U1	TURB BLDG LUBE OIL STRG RM	4.2.3
1-082-U2	TURB BLDG LUBE OIL STRG RM	4.2.3
1-083-U1	TURB BLDG OIL STRG RM	4.2.3
1-083-U2	TURB BLDG OIL STRG RM	4.2.3
1-086-U1	TURB BLDG AUX STM GEN	4.2.3
1-086-U2	TURB BLDG AUX STM GEN	4.2.3
1-090-U1	AUX BLDG COMB STRG & FILTER RM	4.2.3
1-090-U2	AUX BLDG COMB STRG & FILTER RM	4.2.3
1-092-U1	DRUM STATION & STRG & COMB STRG RM	4.2.3
1-092-U2	DRUM STATION & STRG & COMB STRG RM	4.2.3
1-094-U1	AUX BLDG COMB STRG RM	4.2.4.2
1-094-U2	AUX BLDG COMB STRG RM	4.2.3
1-095-U1	AUX BLDG STRG RM	4.2.3
1-095-U2	AUX BLDG STRG RM	4.2.3
1-096-U1	AUX BLDG COMB STRG RM	4.2.3
1-096-U2	AUX BLDG COMB STRG RM	4.2.3
1-097-U1	FILTER HTCH RM & COMB STRG AREA	4.2.3
1-097-U2	FILTER HTCH RM & COMB STRG AREA	4.2.3
1-098-U1	CASK WASH STRG & COMB STRG	4.2.3
1-098-U2	CASK WASH STRG & COMB STRG	4.2.3
1-DU-DGRWIS-A-U1	DG BLDG to RWIS DUCTBANK, U1 TN A	4.2.3
1-DU-DGRWIS-A-U2	DG BLDG to RWIS DUCTBANK, U1 TN A	4.2.3
1-DU-DGRWIS-B-U1	DG BLDG to RWIS DUCTBANK, U1 TN B	4.2.3
1-DU-DGRWIS-B-U2	DG BLDG to RWIS DUCTBANK, U1 TN B	4.2.3
1-DU-DGSWIS-A-U1	DG BLDG to SWIS DUCTBANK, U1 TN A	4.2.4.2
1-DU-DGSWIS-A-U2	DG BLDG to SWIS DUCTBANK, U1 TN A	4.2.4.2
1-DU-DGSWIS-B-U1	DG BLDG to SWIS DUCTBANK, U1 TN B	4.2.4.2
1-DU-DGSWIS-B-U2	DG BLDG to SWIS DUCTBANK, U1 TN B	4.2.4.2



Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
1-DU-DGVB-A-U1	DG BLDG to VLV BOX DCTBNKS, TN A	4.2.4.2
1-DU-DGVB-A-U2	DG BLDG to VLV BOX DCTBNKS, TN A	4.2.3
1-DU-DGVB-B-U1	DG BLDG to VLV BOX DCTBNKS, TN B	4.2.4.2
1-DU-DGVB-B-U2	DG BLDG to VLV BOX DCTBNKS, TN B	4.2.3
1-EMBED-AB-U1	AUX BLDG EMBEDDED CONDUIT	4.2.3
1-EMBED-AB-U2	AUX BLDG EMBEDDED CONDUIT	4.2.3
1-S01-U1	STAIRWELL NO 1	4.2.4.2
1-S01-U2	STAIRWELL NO 1	4.2.3
1-S02-U1	STAIRWELL NO 2	4.2.4.2
1-S02-U2	STAIRWELL NO 2	4.2.3
1-S08-U1	STAIRWELL NO 8	4.2.3
1-S08-U2	STAIRWELL NO 8	4.2.3
1-S10-U1	STAIRWELL NO 10	4.2.3
1-S10-U2	STAIRWELL NO 10	4.2.3
1-SVB1-A-U1	SVC WTR VLV BOX 1-SVB1 TN A	4.2.4.2
1-SVB1-A-U2	SVC WTR VLV BOX 1-SVB1 TN A	4.2.3
1-SVB1-B-U1	SVC WTR VLV BOX 1-SVB1 TN B	4.2.4.2
1-SVB1-B-U2	SVC WTR VLV BOX 1-SVB1 TN B	4.2.3
1-SVB2-A-U1	SVC WTR VLV BOX 1-SVB2 TN A	4.2.4.2
1-SVB2-A-U2	SVC WTR VLV BOX 1-SVB2 TN A	4.2.3
1-SVB2-B-U1	SVC WTR VLV BOX 1-SVB2 TN B	4.2.4.2
1-SVB2-B-U2	SVC WTR VLV BOX 1-SVB2 TN B	4.2.3
1-SVB3-A-U1	SVC WTR VLV BOX 1-SVB3 TN A	4.2.3
1-SVB3-A-U2	SVC WTR VLV BOX 1-SVB3 TN A	4.2.3
1-SVB3-B-U1	SVC WTR VLV BOX 1-SVB3 TN B	4.2.3
1-SVB3-B-U2	SVC WTR VLV BOX 1-SVB3 TN B	4.2.3
1-SVB4-A-U1	SVC WTR VLV BOX 1-SVB4 TN A	4.2.4.2
1-SVB4-A-U2	SVC WTR VLV BOX 1-SVB4 TN A	4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
1-SVB4-B-U1	SVC WTR VLV BOX 1-SVB4 TN B	4.2.4.2
1-SVB4-B-U2	SVC WTR VLV BOX 1-SVB4 TN B	4.2.3
1-TB-U1	TURBINE BLDG GENERAL AREA	4.2.4.2
1-TB-U2	TURBINE BLDG GENERAL AREA	4.2.4.2
2-001-U1	AUX BLDG	4.2.3
2-001-U2	AUX BLDG	4.2.4.2
2-004-U1	AUX BLDG	4.2.4.2
2-004-U2	AUX BLDG	4.2.4.2
2-005-U1	AUX BLDG	4.2.3
2-005-U2	AUX BLDG	4.2.4.2
2-006-U1	AUX BLDG	4.2.3
2-006-U2	AUX BLDG	4.2.4.2
2-008-U1	AUX BLDG CABLE CHASE RM 2116	4.2.4.2
2-008-U2	AUX BLDG CABLE CHASE RM 2116	4.2.4.2
2-009-U1	AUX BLDG CBLE CHASE RMS 2117 & 2246	4.2.4.2
2-009-U2	AUX BLDG CBLE CHASE RMS 2117 & 2246	4.2.4.2
2-012-U1	HALLWAY & LOCAL HOT SHTDWN PNL RM	4.2.3
2-012-U2	HALLWAY & LOCAL HOT SHTDWN PNL RM	4.2.4.2
2-013-U1	AUX BLDG CABLE CHASE, RMS 227, 300, 465, 466 &500	4.2.3
2-013-U2	AUX BLDG CABLE CHASE, RMS 227, 300, 465, 466 &500	4.2.4.2
2-014-U1	CMPTR RM & DUCT CHASE	4.2.3
2-014-U2	CMPTR RM & DUCT CHASE	4.2.4.2
2-015-U1	COMMUNICATION RM	4.2.3
2-015-U2	COMMUNICATION RM	4.2.4.2
2-016-U1	AUX BLDG BATT RM	4.2.3
2-016-U2	AUX BLDG BATT RM	4.2.4.2
2-017-U1	AUX BLDG BATT RM	4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
2-017-U2	AUX BLDG BATT RM	4.2.4.2
2-018-U1	AUX BLDG DC SWGR RM	4.2.3
2-018-U2	AUX BLDG DC SWGR RM	4.2.4.2
2-019-U1	AUX BLDG DC SWGR RM	4.2.3
2-019-U2	AUX BLDG DC SWGR RM	4.2.4.2
2-020-U1	AUX BLDG	4.2.3
2-020-U2	AUX BLDG	4.2.4.2
2-021-U1	AUX BLDG SWGR RMS	4.2.4.2
2-021-U2	AUX BLDG SWGR RMS	4.2.4.2
2-023-U1	AUX BLDG SWGR RM	4.2.4.2
2-023-U2	AUX BLDG SWGR RM	4.2.4.2
2-030-U1	AUX BLDG CABLE CHASE, RMS 2249 & 2252	4.2.4.2
2-030-U2	AUX BLDG CABLE CHASE, RMS 2249 & 2252	4.2.4.2
2-031-U1	AUX BLDG CABLE CHASE, RMS 2250 & 2251	4.2.4.2
2-031-U2	AUX BLDG CABLE CHASE, RMS 2250 & 2251	4.2.4.2
2-034-U1	TN B ELEC PENT RM & FILTER SYST	4.2.3
2-034-U2	TN B ELEC PENT RM & FILTER SYST	4.2.4.2
2-035-U1	TN A ELEC PENT RMS	4.2.3
2-035-U2	TN A ELEC PENT RMS	4.2.4.2
2-039-U1	FUEL STRG & STRG RACK PITS	4.2.3
2-039-U2	FUEL STRG & STRG RACK PITS	4.2.4.2
2-040-U1	CABLE SPREADING RM	4.2.4.2
2-040-U2	CABLE SPREADING RM	4.2.4.2
2-041-U1	TN A SWGR AND LD CTR RMS	4.2.4.2
2-041-U2	TN A SWGR AND LD CTR RMS	4.2.4.2
2-042-U1	AUX BLDG HALLWAY AND COORIDOR	4.2.4.2
2-042-U2	AUX BLDG HALLWAY AND COORIDOR	4.2.4.2
2-043-U1	AUX BLDG	4.2.4.2

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
2-043-U2	AUX BLDG	4.2.4.2
2-054-U1	AUX BLDG ELV MACH RM NO 4 & ELV NO 1 SHAFT	4.2.3
2-054-U2	AUX BLDG ELV MACH RM NO 4 & ELV NO 1 SHAFT	4.2.4.2
2-055-U1	CONTAINMENT	4.2.3
2-055-U2	CONTAINMENT	4.2.4.2
2-075-U1	U2 CABLE TUNNEL TN A	4.2.4.2
2-075-U2	U2 CABLE TUNNEL TN A	4.2.4.2
2-076-U1	U2 CABLE TUNN TN B	4.2.4.2
2-076-U2	U2 CABLE TUNN TN B	4.2.4.2
2-077-U1	COND STRG TK	4.2.3
2-077-U2	COND STRG TK	4.2.3
2-078-U1	RX MAKEUP WTR STRG TK	4.2.3
2-078-U2	RX MAKEUP WTR STRG TK	4.2.3
2-079-U1	REFUEL WTR STRG TK	4.2.3
2-079-U2	REFUEL WTR STRG TK	4.2.4.2
2-080-U1	LOW VOLT SWYD U2	4.2.3
2-080-U2	LOW VOLT SWYD U2	4.2.3
2-081-U1	TURB BLDG BATT RM	4.2.3
2-081-U2	TURB BLDG BATT RM	4.2.4.2
2-089-U1	LUB OIL AND COMB STRG RM	4.2.3
2-089-U2	LUB OIL AND COMB STRG RM	4.2.3
2-090-U1	AUX BLDG COMB STRG & FIL UNIT RM	4.2.3
2-090-U2	AUX BLDG COMB STRG & FIL UNIT RM	4.2.3
2-092-U1	DRUM STA & STRG & COMB STRG RM	4.2.3
2-092-U2	DRUM STA & STRG & COMB STRG RM	4.2.3
2-094-U1	AUX BLDG COMB STRG RM	4.2.3
2-094-U2	AUX BLDG COMB STRG RM	4.2.3
2-096-U1	AUX BLDG COMB STRG RM	4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
2-096-U2	AUX BLDG COMB STRG RM	4.2.3
2-097-U1	FLTR HTCH RM & COMB STRG AREA	4.2.3
2-097-U2	FLTR HTCH RM & COMB STRG AREA	4.2.3
2-098-U1	CASKWSH STRG & COMB STRG AREA	4.2.3
2-098-U2	CASKWSH STRG & COMB STRG AREA	4.2.3
2-DU-ABVB-A-U1	AUX BLDG TO VLV BOX DUCTBANKS, TN A	4.2.3
2-DU-ABVB-A-U2	AUX BLDG TO VLV BOX DUCTBANKS, TN A	4.2.4.2
2-DU-ABVB-B-U1	AUX BLDG TO VLV BOX DUCTBANKS, TN B	4.2.3
2-DU-ABVB-B-U2	AUX BLDG TO VLV BOX DUCTBANKS, TN B	4.2.4.2
2-DU-DGRWIS-A-U1	DG BLDG TO RWIS DUCTBANK, U2 TN A	4.2.3
2-DU-DGRWIS-A-U2	DG BLDG TO RWIS DUCTBANK, U2 TN A	4.2.3
2-DU-DGRWIS-B-U1	DG BLDG TO RWIS DUCTBANK, U2 TN B	4.2.3
2-DU-DGRWIS-B-U2	DG BLDG TO RWIS DUCTBANK, U2 TN B	4.2.3
2-DU-DGSWIS-A-U1	DG BLDG TO SWIS DUCTBANK, U2 TN A	4.2.4.2
2-DU-DGSWIS-A-U2	DG BLDG TO SWIS DUCTBANK, U2 TN A	4.2.4.2
2-DU-DGSWIS-B-U1	DG BLDG TO SWIS DUCTBANK, U2 TN B	4.2.4.2
2-DU-DGSWIS-B-U2	DG BLDG TO SWIS DUCTBANK, U2 TN B	4.2.4.2
2-EMBED-AB-U1	AUX BLDG EMBED CONDUIT	4.2.3
2-EMBED-AB-U2	AUX BLDG EMBED CONDUIT	4.2.3
2-S01-U1	STAIRWELL NO 1	4.2.3
2-S01-U2	STAIRWELL NO 1	4.2.4.2
2-S02-U1	STAIRWEILL NO 2	4.2.3
2-S02-U2	STAIRWEILL NO 2	4.2.4.2
2-S08-U1	STAIRWELL NO 8	4.2.3
2-S08-U2	STAIRWELL NO 8	4.2.3
2-S10-U1	STAIRWELL NO 10	4.2.3
2-S10-U2	STAIRWELL NO 10	4.2.3
2-SVB1-A-U1	SVC WTR VLV BOX 2-SVB1, TN A	4.2.3

Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
2-SVB1-A-U2	SVC WTR VLV BOX 2-SVB1, TN A	4.2.4.2
2-SVB1-B-U1	SVC WTR VLV BOX 2-SVB1, TN B	4.2.3
2-SVB1-B-U2	SVC WTR VLV BOX 2-SVB1, TN B	4.2.4.2
2-SVB2-A-U1	SVC WTR VLV BOX 2-SVB2, TN A	4.2.3
2-SVB2-A-U2	SVC WTR VLV BOX 2-SVB2, TN A	4.2.4.2
2-SVB2-B-U1	SVC WTR VLV BOX 2-SVB2, TN B	4.2.3
2-SVB2-B-U2	SVC WTR VLV BOX 2-SVB2, TN B	4.2.4.2
2-SVB3-A-U1	SVC WTR VLV BOX 2-SVB3, TN A	4.2.3
2-SVB3-A-U2	SVC WTR VLV BOX 2-SVB3, TN A	4.2.4.2
2-SVB3-B-U1	SVC WTR VLV BOX 2-SVB3, TN B	4.2.3
2-SVB3-B-U2	SVC WTR VLV BOX 2-SVB3, TN B	4.2.4.2
2-SVB4-A-U1	SVC WTR VLV BOX 2-SVB4, TN A	4.2.3
2-SVB4-A-U2	SVC WTR VLV BOX 2-SVB4, TN A	4.2.3
2-SVB4-B-U1	SVC WTR VLV BOX 2-SVB4, TN B	4.2.3
2-SVB4-B-U2	SVC WTR VLV BOX 2-SVB4, TN B	4.2.3
2-TB-U1	TURBINE AREA GENERAL AREA	4.2.3
2-TB-U2	TURBINE AREA GENERAL AREA	4.2.4.2
ABRF-U1	CR A/C, U1 & U2	4.2.4.2
ABRF-U2	CR A/C, U1 & U2	4.2.4.2
DU-DGFOST-A-U1	DG FUEL OIL STRG TK DUCTBANK, TN A	4.2.3
DU-DGFOST-A-U2	DG FUEL OIL STRG TK DUCTBANK, TN A	4.2.3
DU-DGFOST-B-U1	DG FUEL OIL STRG TK DUCTBANK, TN B	4.2.3
DU-DGFOST-B-U2	DG FUEL OIL STRG TK DUCTBANK, TN B	4.2.3
DU-SWISVB-A-U1	SWIS TO VLV BOX DUCTBANK, TN A	4.2.4.2
DU-SWISVB-A-U2	SWIS TO VLV BOX DUCTBANK, TN A	4.2.4.2
DU-SWISVB-B-U1	SWIS TO VLV BOX DUCTBANK, TN B	4.2.4.2
DU-SWISVB-B-U2	SWIS TO VLV BOX DUCTBANK, TN B	4.2.4.2
EMBED-DGB-U1	DG BLDG EMBED CONDUIT	4.2.3



Table 4-2 Fire Area Compliance

Fire Area-Unit Affected	Description	NFPA 805 Section 4.2.3 = Deterministic 4.2.4.2 = Perf.-Based
EMBED-DGB-U2	DG BLDG EMBED CONDUIT	4.2.3
SWWVPVB-A-U1	SVC WTR VLV BOX RTRN TO WET PIT, TN A	4.2.4.2
SWWVPVB-A-U2	SVC WTR VLV BOX RTRN TO WET PIT, TN A	4.2.4.2
SWWVPVB-B-U1	SVC WTR VLV BOX RTRN TO WET PIT, TN B	4.2.4.2
SWWVPVB-B-U2	SVC WTR VLV BOX RTRN TO WET PIT, TN B	4.2.4.2
TBRF-U1	TB ROOF HVAC RM, U1&2	4.2.4.2
TBRF-U2	TB ROOF HVAC RM, U1&2	4.2.4.2
YARD-U1	YD AREA MAIN POWER BLOCK	4.2.4.2
YARD-U2	YD AREA MAIN POWER BLOCK	4.2.4.2
YARD-SWIS-U1	YD AREA NEAR SWIS	4.2.4.2
YARD-SWIS-U2	YD AREA NEAR SWIS	4.2.4.2

### 4.3.5 Recovery Actions

#### 4.3.5.1 Compliance Requirements

NFPA 805, Section 1.6.52, "Recovery Action," defines a recovery action as:

*"Activities to achieve the nuclear safety performance criteria that take place outside the main control room or outside the primary control station(s) for the equipment being operated, including the replacement or modification of components."*

NFPA 805, Section 4.2.3.1, states that:

*"One success path of required cables and equipment to achieve and maintain the nuclear safety performance criteria without the use of recovery actions shall be protected by the requirements specified in either 4.2.3.2, 4.2.3.3, or 4.2.3.4, as applicable. Use of recovery actions to demonstrate availability of a success path for the nuclear safety performance criteria automatically shall imply use of the performance-based approach as outlined in 4.2.4."*

NFPA 805 Section 4.2.4, "Performance-Based Approach," states that:

*"When the use of recovery actions has resulted in the use of this approach, the additional risk presented by their use shall be evaluated."*

#### 4.3.5.2 FNP Results

Guidance provided in NEI 04-02, FAQ 07-0030, FAQ 12-0061, and RG 1.205 established the methodology used to determine RAs required for compliance and consisted of the following steps:

**Step 1:**

For FNP Unit 1, in addition to the Main Control Room, the Hot Shutdown Panels (HSPs) are defined as Primary Control Stations and include HSP A, B, D, E, and G located in Fire Area 1-012, Room 254, and HSP C and F located in Fire Area 1-015, Room 202.

For FNP Unit 2, in addition to the Main Control Room, the HSPs are defined as Primary Control Stations and include HSP A, B, D, E and G located in Fire Area 2-015, Room 2202, and the HSP C and F located in Fire Area 2-012, Room 2254.

Operator actions taken outside the Main Control Room or Primary Control Stations that are necessary to activate, turn on, power up, transfer control or indication, or otherwise enable the Primary Control Stations and make it capable of performing its intended function following a fire may be considered as taking place at the Primary Control Stations as long as the actions are feasible and take place in time to allow the Primary Control Stations to perform their intended functions. The switches or other equipment operated to transfer control must be free from fire damage and operators can travel from the Main Control Room to the transfer location and on to the Primary Control Station without being impeded by the fire.

**Step 2:**

On a fire area basis, VFDRs were originally identified in LAR Attachment C, Table B-3. For each VFDR not brought into compliance with the deterministic approach, an evaluation was conducted using the performance-based approach of NFPA 805 Section 4.2.4. Some performance-based evaluations resulted in the need for Recovery Actions to meet the risk acceptance criteria or to maintain a sufficient level of DID. The final set of required Recovery Actions was provided in the LAR Attachment G, Table G-1, "Recovery Actions and Activities Occurring at the Primary Control Station(s)."

**Step 3:**

The set of Recovery Actions necessary to demonstrate the availability of a success path for the NSPC was originally evaluated for additional risk using the process described in NEI 04-02, FAQ 07-0030, and RG 1.205. Any additional risk was evaluated with the guidelines of RG 1.174 and RG 1.205. The additional risk was originally provided in LAR Attachment W. If Recovery Actions were determined to have an adverse risk impact, they were resolved via alternate strategies that eliminated the need for the RA in the NSCA; therefore, none of the Recovery Actions have an adverse impact on the FPRA.

**Step 4:**

All Recovery Actions were originally evaluated (and documented in LAR Attachment G) against the feasibility criteria provided in NEI 04-02, FAQ 07-0030, and RG 1.205. Since actions taken at the Primary Control Stations are not Recovery Actions, their feasibility is evaluated in accordance with procedures for validation of off-normal procedures.

**Step 5:**

The reliability of the specific Recovery Actions added to the Fire PRA was addressed in the Fire PRA Human Failure Evaluation Report F-RIE-FIREPRA-U00-012 in support of the LAR submittal, which has been accepted by the NRC.

#### 4.3.5.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c), dated March 10, 2015 (Section 3.2.6):

*'The NRC staff concluded that, based on the information provided in the LAR, as supplemented, and the information obtained during the NFPA 805 site audit (documents reviewed and discussions with the licensee's staff) that the process used by the licensee to review, categorize and address RAs during the transition from the existing deterministic fire protection licensing basis to a RI/PB FPP is consistent with the NRC-endorsed guidance contained in NEI 04-02 and RG 1.205 regarding the identification of RAs. Provided the licensee completes implementation items 25 and 26 as described in LAR Attachment S, Table S-3, the NRC staff concluded that there is reasonable assurance that the regulatory requirements of 10 CFR 50.48(c) and NFPA 805 for NSCA methods are met.'*

#### 4.3.5.4 Ongoing Compliance Maintenance

Appendix E Tables E-1 and E-2 document the Recovery Actions that support requirements for those fire areas evaluated under the risk-informed, performance-based approach for each unit.

Table E-1 documents all Risk Informed Performance Based Recovery Actions for Unit 1.

Table E-2 documents all Risk Informed Performance Based Recovery Actions for Unit 2.

Table E-3 documents all Control Room Abandonment Actions Taken at the Primary Control Station(s).

Per FAQ 12-0061, any changes to recovery actions since NFPA 805 implementation are evaluated using the same criteria as before. The current revision of SNC Calculation SE-C051326701-011 documents the feasibility of the recovery actions. The reliability of the specific Recovery Actions added to the Fire PRA is addressed in the Fire PRA Human Failure Evaluation Report Calculation F-RIE-FIREPRA-U00-012.

### 4.3.6 Non-Power Operations

#### 4.3.6.1 Compliance Requirements

NFPA 805, Section 1.1, "Scope", states that:

*'This standard specifies the minimum fire protection requirements for existing light water nuclear power plants during all phases of plant operation, including shutdown, degraded conditions, and decommissioning.'*

NFPA 805, Section 1.3.1, "Nuclear Safety Goal", states that:

*'The nuclear safety goal is to provide reasonable assurance that a fire during any operational mode and plant configuration will not prevent the plant from achieving and maintaining the fuel in a safe and stable condition.'*

#### 4.3.6.2 FNP Results

The strategy for controls/protection of equipment during Non-Power Operational (NPO) modes is a combination of normal defense-in-depth actions and additional risk-informed steps/actions when needed. The latter is based on the availability of systems and equipment needed to support Key Safety Functions (KSFs) and whether or not the plant is in a Higher Risk Evolution (HRE). The goal is to ensure that contingency plans are established for planned and forced shut downs when the plant is in an HRE, and there is the possibility of losing a KSF due to fire.

The methodology used to determine NPO strategies is outlined in NEI 04-02 and FAQ 07-0040 and consists of the following:

- a) Determine the Plant Operating States of interest.
- b) Determine the Key Safety Functions (KSFs).
- c) Identify plant equipment supporting KSF success paths.
- d) Identify KSF Pinch Points.
- e) Incorporate steps to manage risk associated with fire induced vulnerabilities during outage high risk evolutions.

The NPO analysis methodology and results are contained in calculation SE-C051326701-005, NFPA 805 Non-Power Operation Review. Higher Risk Evolutions, Fire Risk Management Actions and Pinch Point were defined and requirements established in NMP-OM-002, Shutdown Risk Management. FNP-0-UOP-4.0, General Outage Operations Guidance provided a detailed Pinch Point Contingency Plan for use during established HREs. Additionally, risk-informed compensatory actions are designated for Pinch Point protection based on various risk-related factors.

#### **4.3.6.3 NRC Acceptance**

The NRC staff reviewed LAR Section 4.3, "Non-Power Operational Modes" and LAR Attachment D, "NEI 04-02 Table F-1 Non-Power Operational Modes Transition," to evaluate the licensee's treatment of potential fire impacts during NPOs. The NRC staff concluded that the licensee used the process described in NEI 04-02, as modified by FAQ 07-0040, for demonstrating that the NSPC are met for HREs during NPO modes. This was accepted by the NRC in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) dated March 10, 2015 (Section 3.5.3.1).

#### **4.3.6.4 Ongoing Compliance Maintenance**

The NPO analysis methodology and results are still contained in calculation SE-C051326701-005, NFPA 805 Non-Power Operation Review, which references the latest version of FAQ 07-0040. Higher Risk Evolutions, Fire Risk Management Actions and Pinch Point are defined and requirements established in NMP-OM-002, Shutdown Risk Management. FNP-0-UOP-4.0, General Outage Operations Guidance provides a detailed Pinch Point Contingency Plan for use during established HREs. Additionally, risk-informed compensatory actions are designated for Pinch Point protection based on various risk-related factors.

### **4.4 Fire Probabilistic Risk Assessment**

#### **4.4.1 Compliance Requirements**

NFPA 805, Section 2.4.3, "Fire Risk Evaluations" states that:

*"The PSA methods, tools, and data used to provide risk information for the performance-based evaluation of fire protection features (see 4.2.4.2) or provide risk information to the change analysis described in 2.4.4 shall conform with the requirements in 2.4.3.1 through 2.4.3.3."*

NFPA 805, Section 2.4.4, "Plant Change Evaluation" states that:

*“A plant change evaluation shall be performed to ensure that a change to a previously approved fire protection program element is acceptable. The evaluation process shall consist of an integrated assessment of the acceptability of risk, defense-in-depth, and safety margins.”*

NFPA 805, Section 2.4.3.1 states that:

*“The PSA evaluation shall use core damage frequency (CDF) and large early release frequency (LERF) as measures for risk.”*

NFPA 805, Section 2.4.3.2 states that:

*“The PSA evaluation shall address the risk contribution associated with all potentially risk-significant fire scenarios.”*

NFPA 805, Section 2.4.3.3 states that:

*“The PSA approach, methods, and data shall be acceptable to the AHJ. They shall be appropriate for the nature and scope of the change being evaluated, be based on the as-built and as-operated and maintained plant, and reflect the operating experience at the plant.”*

NFPA 805, Section 4.2.4.2 “Use of Fire Risk Evaluations”, states that:

*“Use of fire risk evaluation for the performance-based approach shall consist of an integrated assessment of the acceptability of risk, defense-indepth, and safety margins.”*

#### 4.4.2 FNP Results

The internal events PRA was modified to capture the effects of fire both as an initiator of an event and as a potential failure mode of affected circuits and individual targets. The Fire PRA for the initial License Amendment was developed using the guidance for Fire PRA development in NUREG/CR- 6850, and FAQs. The following calculations documented the Fire PRA results for the LAR and subsequent RAI responses

**Table 4-3 LAR Fire PRA Calculations**

Calculation No.	Title
PRA-BC-F-11-002	Component Selection
PRA-BC-F-11-003	PRA-BC-F-11-003
PRA-BC-F-11-004	FPRA Logic Model
PRA-BC-F-11-006	Seismic Fire Interaction
PRA-BC-F-11-009	Plant Partitioning and Fire Ignition Frequency
PRA-BC-F-11-013	Circuit Failure Mode and Likelihood Analysis
PRA-BC-F-11-014	Fire Scenario Development
PRA-BC-F-11-015	Hot Gas layer and Multi-compartment Analysis
PRA-BC-F-11-016	Human Reliability Analysis for Fire Events
PRA-BC-F-11-017	Farley Fire PRA Summary Report

Fire modeling was performed as part of the original Fire PRA development (NFPA 805 Section 4.2.4.2) utilizing fire model guidance in RG 1.205, Regulatory Position 4.2 and Section 5.1.2 of NEI 04-02.

The FNP Fire PRA peer review was conducted by the Westinghouse Owners Group in October 2011 under LTR-RAM-II-12-007, “Fire PRA Peer Review Against the Fire PRA Standard

Supporting Requirements from Section 4 of the ASME/ANS PRA Standard for the Farley Nuclear Plant Fire Probabilistic Risk Assessment” in accordance with NEI 07-12 as endorsed by RG 1.200 Rev 2. The conclusion of the review was that the FNP methodologies used were appropriate and sufficient to satisfy the ASME/ANS PRA Standard RA-Sa-2009. The review team also noted that NUREG/CR-6850 methodologies were applied correctly and concluded that the FNP Fire PRA was consistent with the ASME/ANS PRA Standard and supports risk-informed applications.

The technical adequacy of the portions of the Internal Events PRA (IEPRA) model used to support development of the Fire PRA model was reviewed using the American Society of Mechanical Engineers/American Nuclear Society (ASME/ANS) RA-Sa-2009, "Standard for Level 1/LERF PRA for Nuclear Power Plant Applications" (ASME/ANS PRA Standard).<sup>2</sup> The review was conducted by a team of knowledgeable industry (vendor and utility) personnel of the Farley Nuclear Plant (FNP) Internal Events PRA utilizing the RG 1.200, Revision 2, Peer Review against the ASME PRA standard requirements. In the course of this review, seventy-eight new Facts and Observations (F&Os) were prepared, including three "Best Practices", thirty-five "Suggestions" and forty "Findings". These have been reviewed and their resolution found acceptable by the NRC.

#### 4.4.3 NRC Acceptance

The risk change due to the NFPA 805 transition met the acceptance guidelines of RG 1.205. In accordance with that guidance, the results of the FREs for each Fire Area were combined (including the assessment of additional risk of recovery actions) for FNP. The total risk increase (when considering total plant risk) was then compared to the acceptance criteria of RG 1.174 (increases are below 1.0E-05 and 1.0E-06 for CDF and LERF, respectively.)

From Table W-6 of the LAR, the delta CDF/LERF was as follows:

- • <0/rx-yr | <0/rx-yr, respectively for Unit 1
- • <0/rx-yr | <0/rx-yr, respectively for Unit 2

The '<0' is based on the non-VFDR risk reduction modifications as described at the bottom of LAR Table W-6.

Table W-6, FNP Fire Area Risk Summary of Attachment W – Fire PRA Insights to the LAR dated September 25, 2012 was revised in response to RAI 36 and submitted on August 29, 2014. This revised Table W-6 summarizes the individual fire area contributions to risk worth at time of NFPA 805 transition. These risk numbers are living data subject to new risk insights or plant changes identified in the NFPA 805 Monitoring Program. The risk values used to support the NFPA 805 Safety evaluation were:

**Table 4-4 NFPA 805 Safety Evaluation Total Plant Risk**

	Unit 1 CDF	Unit 2 CDF	Unit 1 LERF	Unit 2 LERF
Total Plant Risk	9.40E-5	9.86E-5	5.16E-6	7.49E-6

Consistent with the Full Power Internal Events model, the CDF/LERF is calculated on a train basis and then averaged together to obtain the total plant CDF/LERF and delta CDF/LERF.

<sup>2</sup> Internal Events initially only included events such reactor trip, loss of coolant, loss of power and SGTR as examples. In recent years, internal events have expanded to include internal fire and flooding events.



The total risk for CDF and LERF met the RG 1.174 criteria being below 1E-04/yr. for CDF and 1E-05/yr. for LERF.

#### 4.4.4 Ongoing Compliance Maintenance

The Fire PRA update in 2017 resulted in the use of 4 new methods that required a focused scope peer review. These were: 1) treatment of junction box fires, 2) treatment of tray fires, 3) incorporation of NUREG/CR-7150, and 4) incorporation of NUREG-2180. A focused scope peer review was held to review these methods and the conclusion of the review was that the FNP methodologies used were appropriate and sufficient to satisfy the ASME/ANS PRA Standard RA-Sa-2009 for the Fire PRA for FNP Units 1 and 2. The two key results from the assessment are the determination of the total plant risk and the total net change in risk (increase) associated with the transition to NFPA 805. In addition to the previous methodology, the 2017 update of the Fire PRA utilized data from NUREG 2180 and additional industry guidance to update or create the following model development documents:

Table 4-5: Fire PRA Calculations	
Calculation No.	Title
F-RIE-FIREPRA-U00-001	Plant Partitioning and Fire Ignition Frequency for Farley Fire PRA
F-RIE-FIREPRA-U00-002	Equipment Selection for Farley Fire PRA
F-RIE-FIREPRA-U00-003	Farley Fire PRA Cable Selection and Detailed Circuit Failure Analysis
F-RIE-FIREPRA-U00-005	Fire PRA Logic Model for Farley Nuclear Plants
F-RIE-FIREPRA-U00-008A	Fire Probabilistic Risk Assessment Fire Scenario Report
F-RIE-FIREPRA-U00-008B	Evaluation of the Control Room Abandonment Times at Farley Nuclear Plant
F-RIE-FIREPRA-U00-008C	Hot Gas Layer and Multi-Compartment Analysis
F-RIE-FIREPRA-U00-008D	Fire Modeling Treatments
F-RIE-FIREPRA-U00-010	Farley Fire PRA Circuit Failure Mode Likelihood Analysis
F-RIE-FIREPRA-U00-012	Human Reliability Analysis for Fire Events
F-RIE-FIREPRA-U00-013	Seismic Fire Interaction
F-RIE-FIREPRA-U00-014	Fire Probabilistic Risk Assessment Summary Report
SNC Record # 05058-RPT-027	NFPA 805 Transition Risk Results for Farley

Given the scope and extent of data, model, and Fire PRA treatment changes (e.g., NUREG-2169, NUREG-2178, NUREG-2180, etc.) together with internal events PRA model changes related to RCP seal performance (including asymmetric cooling), and the fact that these models have all been updated, a formal update of the total plant risk using the latest FNP PRA models was conducted. The total plant risk was updated as part of the analyses to support transition to NFPA 805. These updated values must be combined with the latest updated risk metrics for the other hazard categories to produce an updated total plant risk estimate.

The total plant risk is obtained by summing the CDF and LERF results from the various PRA models. Each of these models have their own suite of reports and analysis documents. The

applicable CDF and LERF metrics are extracted from those documents and have been summarized in the tables below.

Table 4-6 Unit 1 Total Plant Risk

Hazard Type	Unit 1 CDF		Unit 1 LERF	
	Train A Alignment	Train B Alignment	Train A Alignment	Train B Alignment
Internal Events (incl flooding)	8.93E-6	8.86E-6	1.68E-7	1.83E-7
Fire	8.24E-5	8.46E-5	4.04E-6	4.37E-6
Seismic	4.51E-6	4.51E-6	2.07E-6	2.07E-6
Other External Events	NA	NA	NA	NA
Total	9.58E-5	9.80E-5	6.28E-6	6.62E-6
AVERAGE		9.69E-5		6.45E-6

Table 4-7 Unit 2 Total Plant Risk

Hazard Type	Unit 2 CDF		Unit 2 LERF	
	Train A Alignment	Train B Alignment	Train A Alignment	Train B Alignment
Internal Events (incl flooding)	8.75E-6	8.76E-6	1.70E-7	1.60E-7
Fire	7.81E-5	7.97E-5	4.08E-6	4.94E-6
Seismic	4.51E-6	4.51E-6	2.07E-6	2.07E-6
Other External Events	NA	NA	NA	NA
Total	9.14E-5	9.30E-5	6.32E-6	7.17E-6
AVERAGE		9.22E-5		6.75E-6

The results shown above are below the acceptance criteria for total plant risk of 1E-4 and 1E-5 for CDF and LERF, respectively. The Unit 2 CDF and LERF results are lower than the totals previously provided to the NRC. However, the Unit 1 CDF and LERF values are slightly higher but still within acceptable limits as defined in RG 1.174 and the NRC SE for NFPA 805.

The change in risk is an evaluation of the transition risk relative to a fully compliant plant. The fully compliant plant configuration represents a fully compliant plant with all VFDR conditions eliminated and credit taken for both VFDR related and risk reduction modifications. The analysis process involves obtaining the risk metrics from the base Fire PRA model and subtracting the risk associated with a hypothetical plant configuration that is fully compliant.

The extent of changes (data, model, modifications, etc.) could not be isolated to specific aspects of the analysis and fire scenarios, such that a parametric or sensitivity approach could be used to address the specific scenarios that are determined to be impacted. However, the changes that impacted the FNP Fire PRA were extensive and impact a very large number of fire scenarios. The impacts are varied in that some changes would tend to increase the risk results while others would tend to reduce the risk results. Because of the extensive changes, an approach that attempts to focus the analysis on only the impacted scenarios is not viable. The situation with the FNP Fire PRA is such that numerous changes that impact the Fire PRA have occurred. The underlying data for the Fire PRA, as well as the VFDR scope, have changed. The analytical treatment of various aspects of the Fire PRA such as credit for incipient smoke

detectors, electrical cabinets heat release rates, fire ignition frequency, and RCP seal performance modeling, have all changed. As such, it is not possible to isolate a limited number of impacted fire scenarios. Instead, a comprehensive assessment of the change in risk that occurs in each of the FNP Fire Areas was necessary and was performed for FNP. The results are described in SNC Record # 05058-RPT-027 and summarized in the table below:

Table 4-8 Change In Risk		
Unit/End State	Change in Risk	Acceptance Criteria
Unit 1 CDF	< 0	< 1E-05
Unit 1 LERF	<0	< 1E-06
Unit 2 CDF	9.75E-06	< 1E-05
Unit 2 LERF	< 0	<1E-06

The delta risk for CDF and LERF meet the RG 1.174 criteria for being below 1E-05/yr. for CDF and 1E-06/yr. for LERF.

## 4.5 Fire Modeling

### 4.5.1 Compliance requirements

NFPA 805 allows both Fire Modeling and Fire Risk Evaluations (FRE) as Performance Based (PB) alternatives to the deterministic approach outlined in the standard. These two PB approaches are described in NFPA 805, Sections 4.2.4.1 and 4.2.4.2, respectively. Although fire modeling and FREs are presented as two different approaches for PB compliance, the FRE approach generally involves some degree of fire modeling to support engineering analyses and fire scenario development. NFPA 805, Section 1.6.18, defines a fire model as a *"mathematical prediction of fire growth, environmental conditions, and potential effects on SSCs based on the conservation equations or empirical data."*

### 4.5.2 FNP Results

Farley Nuclear Plant did not utilize fire modeling methods to support PB evaluations in accordance with NFPA 805, Section 4.2.4.1, as the sole means for demonstrating compliance with the NSPC.

### 4.5.3 NRC Acceptance

As stated in the LAR, Section 4.5.2.1, FNP did not use the fire modeling approach for demonstrating compliance with NFPA 805. The licensee used the FRE PB approach (i.e., FPRA) with input from fire modeling analyses. Therefore, the NRC staff reviewed the technical adequacy of the FREs, including the supporting fire modeling analyses, as documented in SE Section 3.4.2, to evaluate compliance with the NSPC.

### 4.5.4 Ongoing Compliance Maintenance

Not Applicable - Fire Modeling approach not used at Farley.

## 4.6 Radioactive Release

### 4.6.1 Compliance Requirements

NFPA 805 Chapter 1 defines the radioactive release goals, objectives, and performance criteria that must be met by the FPP in the event of a fire at a nuclear power plant in any plant operational mode as follows:

- NFPA 805, Section 1.3.2, Radioactive Release Goal states:  
*The radioactive release goal is to provide reasonable assurance that a fire will not result in a radiological release that adversely affects the public, plant personnel, or the environment.*
- NFPA 805, Section 1.4.2, Radioactive Release Objective states:  
*Either of the following objectives shall be met during all operational modes and plant configurations.*  
*(1) Containment integrity is capable of being maintained.*  
*(2) The source term is capable of being limited.*
- NFPA 805, Section 1.5.2, Radioactive Release Performance Criteria states:  
*Radiation release to any unrestricted area due to the direct effects of fire suppression activities (but not involving fuel damage) shall be as low as reasonably achievable and shall not exceed applicable 10 CFR Part 20 limits.*

### 4.6.2 FNP Results

The pre-transition Fire Protection Program was reviewed against the NFPA 805 requirements for fire suppression related radioactive release. The review was performed using the methodology contained in SM-C051326701-010, NFPA 805 Radiological Release Calculation which used the guidance from NEI 04-02, Revision 2 (Sections 4.3 and Appendix G), as endorsed by RG 1.205. This review also utilized the guidance of FAQ 09-0056, Radioactive Release Transition. The methodology consisted of:

- Identifying those Fire Areas where radioactive materials were present and where there was a potential for generating radioactive effluents during fire suppression activities.
- Reviewing fire pre-plans and fire brigade training materials and identifying FPP elements (e.g., systems, components, procedural actions) that were being credited to meet the radioactive release goals, objectives and performance criteria.
- Reviewing engineering controls to ensure containment of gaseous and liquid effluents (e.g., smoke and fire fighting agents).

The following reviews were conducted:

- An Airborne Effluent Evaluation demonstrated that existing Auxiliary Building ventilation systems and boundaries are effective in meeting the NFPA 805 goal.
- A Liquid Effluent Evaluation demonstrated that existing Auxiliary Building floor drains and liquid waste collection systems are effective in meeting the NFPA 805 goal.
- An Administrative Controls Evaluation resulted in several required enhancements as follows:
  - (1) Clearer guidance in related procedures for potential fire-related radioactive release, including update of the Pre-fire Plans to show areas of potential release.

- (2) Revised Fire Brigade training on the new objectives to control radiological releases during fire.
- (3) Administrative controls to keep radioactive contamination within secure metal containers for RCA(s) outside of hardened structures (e.g., Auxiliary Building) when contamination levels are high enough to warrant.

These reviews and actions provided reasonable assurance that radiation levels to any unrestricted area resulting from the direct effects of fire suppression activities are as low as reasonably achievable and are not likely to exceed the radiological release performance criteria of NFPA 805 and the radiological dose limits in 10 CFR Part 20.

#### 4.6.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) dated March 10, 2015 (Section 3.6.8):

*“Based on these factors, the NRC staff concludes that, subject to completion of the implementation items, the licensee’s RI/PB FPP provides reasonable assurance that radiation releases to any unrestricted area resulting from the direct effects of fire suppression activities are as low as reasonably achievable and are not likely to exceed the radiological release performance criteria of NFPA 805 and the radiological dose limits in 10 CFR Part 20. The NRC staff therefore concludes that the licensee’s approach is acceptable and that the FPP will comply with the requirements specified in NFPA 805, Sections 1.3.2, 1.4.2, and 1.5.2.”*

#### 4.6.4 Ongoing Compliance Maintenance

The review continues to be performed using the methodology contained in SM-C051326701-010, NFPA 805 Radiological Release Calculation which used the guidance from NEI 04-02, Revision 2 (Sections 4.3 and Appendix G), as endorsed by RG 1.205. This review also utilizes the guidance of FAQ 09-0056, Radioactive Release Transition. See SM-C051326701-010, NFPA 805 Radiological Release Calculation for a summary of the Radioactive Release results.

### 4.7 Fire Response

#### 4.7.1 Compliance Requirements

NFPA 805, Section 3.4.1, “On-Site Fire Fighting Capability” states that:

*“All of the following requirements shall apply. Emergency response procedures for the plant industrial fire brigade.*

*(a) A fully staffed, trained, and equipped fire-fighting force shall be available at all times to control and extinguish all fires on site. This force shall have a minimum complement of five persons on duty and shall conform with the following NFPA standards as applicable:*

- (1) NFPA 600, Standard on Industrial Fire Brigades (interior structural fire fighting)*
- (2) NFPA 1500, Standard on Fire Department Occupational Safety and Health Program*
- (3) NFPA 1582, Standard on Medical Requirements for Fire Fighters and Information for Fire Department Physicians*

*(b)\*Industrial fire brigade members shall have no other assigned normal plant duties that would prevent immediate response to a fire or other emergency as required.*

*(c) During every shift, the brigade leader and at least two brigade members shall have sufficient training and knowledge of nuclear safety systems to understand the effects of fire and fire*

*suppressants on nuclear safety performance criteria. Exception to (c): Sufficient training and knowledge shall be permitted to be provided by an operations advisor dedicated to industrial fire brigade support.*

*(d)\*The industrial fire brigade shall be notified immediately upon verification of a fire.*

*(e) Each industrial fire brigade member shall pass an annual physical examination to determine that he or she can perform the strenuous activity required during manual firefighting operations. The physical examination shall determine the ability."*

NFPA 805, Section 3.4.2\*, "Pre-Fire Plans" states that:

*"Current and detailed pre-fire plans shall be available to the industrial fire brigade for all areas in which a fire could jeopardize the ability to meet the performance criteria described in Section 1.5.*

*3.4.2.1\* The plans shall detail the fire area configuration and fire hazards to be encountered in the fire area, along with any nuclear safety components and fire protection systems and features that are present.*

*3.4.2.2 Pre-fire plans shall be reviewed and updated as necessary.*

*3.4.2.3\* Pre-fire plans shall be available in the control room and made available to the plant industrial fire brigade.*

*3.4.2.4\* Pre-fire plans shall address coordination with other plant groups during fire emergencies."*

NFPA 805, Section 3.4.3, "Training and Drills" states that:

*"Industrial fire brigade members and other plant personnel who would respond to a fire in conjunction with the brigade shall be provided with training commensurate with their emergency responsibilities.*

*(a) Plant Industrial Fire Brigade Training. All of the following requirements shall apply.*

*(1) Plant industrial fire brigade members shall receive training consistent with the requirements contained in NFPA 600, Standard on Industrial Fire Brigades, or NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, as appropriate.*

*(2) Industrial fire brigade members shall be given quarterly training and practice in fire fighting, including radioactivity and health physics considerations, to ensure that each member is thoroughly familiar with the steps to be taken in the event of a fire.*

*(3) A written program shall detail the industrial fire brigade training program.*

*(4) Written records that include but are not limited to initial industrial fire brigade classroom and hands-on training, refresher training, special training schools attended, drill attendance records, and leadership training for industrial fire brigades shall be maintained for each industrial fire brigade member.*

*(b) Training for Non-Industrial Fire Brigade Personnel. Plant personnel who respond with the industrial fire brigade shall be trained as to their responsibilities, potential hazards to be encountered, and interfacing with the industrial fire brigade.*

*(c)\*Drills. All of the following requirements shall apply.*

*(1) Drills shall be conducted quarterly for each shift to test the response capability of the industrial fire brigade.*



(2) Industrial fire brigade drills shall be developed to test and challenge industrial fire brigade response, including brigade performance as a team, proper use of equipment, effective use of pre-fire plans, and coordination with other groups. These drills shall evaluate the industrial fire brigade's abilities to react, respond, and demonstrate proper fire-fighting techniques to control and extinguish the fire and smoke conditions being simulated by the drill scenario.

(3) Industrial fire brigade drills shall be conducted in various plant areas, especially in those areas identified to be essential to plant operation and to contain significant fire hazards.

(4) Drill records shall be maintained detailing the drill scenario, industrial fire brigade member response, and ability of the industrial fire brigade to perform as a team.

(5) A critique shall be held and documented after each drill."

NFPA 805, Section 3.4.4, "Fire-Fighting Equipment" states that:

*"Protective clothing, respiratory protective equipment, radiation monitoring equipment, personal dosimeters, and fire suppression equipment such as hoses, nozzles, fire extinguishers, and other needed equipment shall be provided for the industrial fire brigade. This equipment shall conform with the applicable NFPA standards."*

NFPA 805, Section 3.4.5, "Off-Site Fire Department Interface" states that:

*"3.4.5.1 Mutual Aid Agreement. Off-site fire authorities shall be offered a plan for their interface during fires and related emergencies on site."*

*3.4.5.2\* Site-Specific Training. Fire fighters from the off-site fire authorities who are expected to respond to a fire at the plant shall be offered site-specific training and shall be invited to participate in a drill at least annually."*

*3.4.5.3\* Security and Radiation Protection. Plant security and radiation protection plans shall address off-site fire authority response."*

*3.4.6\* Communications. An effective emergency communications capability shall be provided for the industrial fire brigade."*

## **4.7.2 FNP Results**

### **4.7.2.1 Operations Response**

Operations response to fire in the power block is controlled through:

- FNP-0-AOP-29.0, Abnormal Operating Procedure: Plant Fire
- FNP-1/2-AOP-28.2, Abnormal Operating Procedure: Fire in the Control Room
- FNP-1/2-AOP-28.1, Abnormal Operating Procedure: Fire or Inadvertent Fire Protection System Actuation in the Cable Spreading Room

Emergency Planning procedure FNP-0-EIP-13.0, Fire Emergencies provides site-level command guidance to support fire response, including obtaining external assistance.

### **4.7.2.2 Fire Brigade Response**

NMP-ES-035-010, Fire Brigade, established the required elements that constitute an effective fire brigade response capability at Farley Nuclear Plant as required by 10 CFR 50.48 – Fire Protection.

FNP-0-FPP-1.0 and applicable SOPs would be utilized to direct firefighting efforts.



The Fire Brigade was trained and monitored for capability and readiness via:

- NMP-TR-425, Fire Drill Program
- NMP-TR-426, Fire Training Program
- MS-MED-009, Fire Brigade Physical Examination Procedure

Pre-Fire Plans (PFPs) for each Fire Area were created to provide:

- Those areas with higher risk significance.
- Fire hazards within the area
- Available fire suppression features
- Available ventilation features
- Radioactive release guidance
- Drawings that readily display critical information for Fire Brigade effectiveness.

PFPs are contained in document books FNP-1/2-FPP-1.0/2.0/3.0 and FNP-0-FPP-1.0/2.0/3.0/4.0

#### 4.7.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) dated March 10, 2015 (Section 3.1.1.1):

*“The NRC staff concludes that the licensee’s statements of compliance are acceptable because the associated actions as described in LAR Attachment A and listed in LAR Attachment S, for the individual attributes described above, as well as the statements that these items will be completed prior to implementation, are acceptable because completion of the implementation items will bring these attributes into compliance with the requirements of NFPA 805 and would be required by the proposed license condition.”*

#### 4.7.4 Ongoing Compliance Maintenance

The procedures and processes referenced in Section 4.7.2 continue to implement this requirement of the program.

## 5.0 PROGRAM DOCUMENTATION, CONFIGURATION CONTROL, AND QUALITY

### 5.1 Program Documentation

#### 5.1.1 Compliance Requirements

NFPA 805, Section 2.7.1.1 states:

*“The analyses performed to demonstrate compliance with this standard shall be documented for each nuclear power plant (NPP). The intent of the documentation is that the assumptions be clearly defined and that the results be easily understood, that results be clearly and consistently described, and that sufficient detail be provided to allow future review of the entire analyses. Documentation shall be maintained for the life of the plant and be organized carefully so that it can be checked for adequacy and accuracy either by an independent reviewer or by the AHJ.”*

NFPA 805, Section 2.7.1.2 states:

*“A fire protection program design basis document shall be established based on those documents, analyses, engineering evaluations, calculations, and so forth that define the fire protection design basis for the plant. As a minimum, this document shall include fire hazards identification and nuclear safety capability assessment, on a fire area basis, for all fire areas that could affect the nuclear safety or radioactive release performance criteria defined in Chapter 1.”*

NFPA 805, Section 2.7.1.3 states:

*“Detailed information used to develop and support the principal document shall be referenced as separate documents if not included in the principal document.”*

#### 5.1.2 FNP Results

The FNP Fire Protection Program design basis is a compilation of multiple analyses, calculations, engineering evaluations, databases and drawings. These design basis documents were performed in accordance with FNP processes that met or exceeded the requirements of documentation outlined above.

Design analysis and calculation procedural guidance for FNP provides methods and requirements to ensure that design inputs and assumptions are clearly defined, that results are easily understood and that sufficient detail is provided to allow for future review of the analysis. The analysis process requires appropriate design and engineering review and approval and the approved analyses are controlled documents maintained for the life of the plant.

#### 5.1.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c), dated March 10, 2015 (Section 3.8.1):

*“Based on the LAR description, as supplemented, on the content of the FPP design basis and supporting documentation, and taking into account the licensee’s plans to maintain this documentation throughout the life of the plant, the NRC staff concludes that the licensee’s approach for meeting the requirements of NFPA 805, Sections 2.7.1.1, 2.7.1.2, and 2.7.1.3, regarding adequate development and maintenance of the FPP design basis documentation, is acceptable.”*

#### 5.1.4 Ongoing Compliance Maintenance

The NFPA 805 FPP Design Basis Document (DWG A-181805) summarizes the significant attributes of the program and provides a roadmap for users to efficiently access more detailed information. The information is housed in the current revisions of the referenced calculations and the FSA module of the ArcPlus™ database, which is a controlled QA database and is the source for Appendix F. This document is subject to periodic NRC audit and inspection.

Configuration control of the existing FPP during the transition period was maintained by the FNP change evaluation process, as defined in existing FNP configuration management and configuration control procedures.

Post transition, FNP utilizes a modified and enhanced change evaluation process based on guidance provided in NEI 04-02, Section 5.3 and other regulatory guidance. The enhanced change evaluation process includes a screening function to efficiently eliminate changes that do not impact the Fire Protection Program. Those changes that potentially affect the FPP are further evaluated, including for impacts to the performance-based, risk informed design bases of the FPP.

This change process is controlled in procedure NMP-ES-035-006, Fire Protection Program Impact Screen and Detailed Reviews, and attendant sub-procedures and forms.

### 5.2 Configuration Control

#### 5.2.1 Compliance Requirements

NFPA 805, Section 2.7.2 provides the requirements for configuration control. Section 2.7.2.1, "Design Basis Document", states:

*"The design basis document shall be maintained up-to-date as a controlled document. Changes affecting the design, operation, or maintenance of the plant shall be reviewed to determine if these changes impact the fire protection program documentation."*

NFPA 805, Section 2.7.2.2, "Supporting Documentation", states:

*"Detailed supporting information shall be retrievable records. Records shall be revised as needed to maintain the principal documentation up-to-date."*

#### 5.2.2 FNP Results

FNP has existing configuration control processes and procedures for establishing, revising, or utilizing program documentation. These processes and procedures will be utilized for the new fire protection program documentation. In addition, the NFPA 805 required change evaluation process will be implemented to maintain configuration control of the fire protection program.

#### 5.2.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c), dated March 10, 2015 (Section 3.8.2):

*"Based on the LAR description of the FNP configuration control process, which indicates that the new FPP design basis and supporting documentation will be controlled documents and that plant changes will be reviewed for impact on the FPP, the NRC staff concludes that the licensee has a configuration control process that provides reasonable assurance that the requirements of NFPA 805 Sections 2.7.2.1 and 2.7.2.2 are met."*

#### 5.2.4 Ongoing Compliance Maintenance

Overall design control and configuration management of FNP is maintained by SNC fleet procedure NMP-ES-084, Design Control/Configuration Management Processes, and its sub-tier documents. These documents apply to any changes that may impact the fire protection program. In addition, SNC fleet procedure NMP-ES-035-006, Fire Protection Program Impact Screen and Detailed Reviews, will ensure that the fire protection program documentation is maintained up-to-date.

### 5.3 Quality

#### 5.3.1 Compliance Requirements

NFPA 805, Section 2.7.3, “Quality”, provides requirements for review, verification and validation, limitations of use, qualification of users, and uncertainty analysis. The specific requirements are described in NFPA 805 Sections 2.7.3.1 through 2.7.3.5.

#### 5.3.2 FNP Results

The existing Fire Protection QA program was maintained during the NFPA 805 transition. The Fire Protection QA program met and continues to meet the applicable requirements of NFPA 805 Sections 2.7.3.1 through 2.7.3.5.

#### 5.3.3 NRC Acceptance

The NRC acceptance for each of these NFPA 805 sections is summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c), dated March 10, 2015, as noted below.

NRC SE Section 3.8.3.1 states:

*“The NRC staff concludes that the licensee’s approach for meeting the Quality requirements of NFPA 805, Section 2.7.3.1, is acceptable because the licensee provided a description of the process for performing independent reviews of analyses, calculations, and evaluations for review.”*

NRC SE Section 3.8.3.2.4 states:

*“Based on the licensee’s description of the FNP process for V&V of calculational models and numerical methods and its continued use post-transition, the NRC staff concludes that the licensee’s approach to meeting the requirements of NFPA 805 Section 2.7.3.2 is acceptable because the models are consistent with approved uses in NRC guidance or other authoritative publications and because the licensee identified an action [LAR Implementation Item 34] that will result in compliance with NFPA 805 and would be required by the proposed license condition.”*

NRC SE Section 3.8.3.3.4 states:

*“Based on the licensee’s statements that the fire models used to support development of the FREs were used within their limitations, and the description of the FNP process for placing limitations on the use of engineering methods and numerical models, the NRC staff concludes that the licensee’s approach to meeting the requirement of NFPA 805 Section 2.7.3.3 is acceptable because the models are consistent with approved uses in NRC guidance or other authoritative publications and the licensee identified an action [LAR Implementation Item 34] that will result in compliance with NFPA 805 and the action would be required by the proposed license condition.”*

NRC SE Section 3.8.3.4 states the following with respect to NFPA 805 Section 2.7.3.4:

*“The NRC staff concludes that competent and experienced personnel developed the FNP FREs, including the supporting fire modeling calculations and including the additional documentation for models and empirical correlations not identified in previous NRC approved V&V documents.” and*

*“The NRC staff concludes that this action [LAR Implementation Item 29] is acceptable because the action will incorporate the provisions of NFPA 805 [Section 2.7.3.4] in the FPP and because it would be required by the proposed license condition.”*

NRC SE Section 3.8.3.5.4 states:

*“Based on the licensee’s description of the FNP process for performing an uncertainty analysis, the NRC staff concludes that the licensee’s approach for meeting the requirements of NFPA 805 Section 2.7.3.5 is acceptable.”*

### **5.3.4 Ongoing Compliance Maintenance**

NFPA 805, Section 2.7.3.1 requires that each analysis, calculation, or evaluation performed be independently reviewed. Independent reviews of analyses, calculations, and evaluations, including those performed in support of compliance with 10 CFR 50.48(c) were conducted as required by existing FNP procedures. These same requirements continue to apply.

The continued use of existing FNP processes and procedures, as revised in accordance with LAR Implementation Items 29 and 34, will ensure the continued compliance with the NFPA 805 requirements for verification and validation, limitations of use, qualification of users, and uncertainty analysis.

## 6.0 MONITORING

### 6.1 Compliance Requirements

Because an NFPA 805 Fire Protection Program is based on these risk insights from analyses that utilize probability or performance-based inputs, those inputs must be validated on an ongoing basis to ensure that program bases are maintained. NFPA 805 Section 2.6 states that:

*“A monitoring program shall be established to ensure that the availability and reliability of the fire protection systems and features are maintained and to assess the performance of the fire protection program in meeting the performance criteria. Monitoring shall ensure that the assumptions in the engineering analysis remain valid.”*

FAQ 10-0059 assists with clarification of the NFPA 805 requirement.

While traditional fire protection programs have utilized monitoring in the forms of surveillance testing, equipment inspections, system and program health reporting and programmatic audits, an ongoing validation process for performance and risk based inputs to analyses is a new monitoring element required for NFPA 805 licensed plants. [Note: The NFPA 805 Monitoring Program is required by 10 CFR 50.48(c), “Fire Protection” but is not required by 10CFR50.65, “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” (i.e., Maintenance Rule)].

### 6.2 FNP Results

An NFPA 805 Monitoring Program is established that encompasses all aspects for monitoring the performance of the Fire Protection Program (FPP). And, because this NFPA 805 Monitoring Program requires many of the same performance-based identification, collection and reporting elements that are contained in the Maintenance Rule Program, it is housed in NMP-ES-027-001 and detailed in that procedure

The NFPA 805 Monitoring Program consists of four parts:

1. Identification of the full monitoring scope of SSCs and programmatic elements of the overall FPP. (Calculation SM-C051326701-016, NFPA 805 Monitoring Scoping Evaluation)
2. Risk screening of each unique component, functional group of components or program to determine:
  - Whether qualitative monitoring is required and exists or needs to be established.
  - Whether performance-based monitoring is required and exists or needs to be established based on classification as High Safety Significant (HSS). (Calculation SM-C051326701-017, NFPA 805 Monitoring Screening Evaluation)
3. Identification and validation of acceptance criteria for performance parameters of High Safety Significant (HSS) SSCs of the FPP. (Calculations SM-C051326701-014, NFPA 805 Qualitative Monitoring Evaluation and SM-C051326701-015, NFPA 805 Quantitative Risk Target Evaluation.
4. Ongoing monitoring of the FPP with clearly identified methods, responsibilities and integration with existing monitoring (e.g., Maintenance Rule Program and Health Reporting) and corrective action processes as directed in procedures:
  - NMP-ES-027, Maintenance Rule Program
  - NMP-ES-027-001, Engineering Maintenance Rule Implementation
  - NMP-ES-035-002, Fire Protection Program Notebooks

- NMP-GM-002, Corrective Action Program

### 6.3 NRC Acceptance

As summarized in the Safety Evaluation for Transition to A Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) dated March 10, 2015 (Section 3.7.2):

*“The NRC staff reviewed the licensee’s RI/PB FPP and concludes that the licensee’s approach for meeting the requirements of NFPA 805, Sections 2.6, regarding the monitoring program is acceptable and that there is reasonable assurance that the licensee will develop a monitoring program that meets the requirements specified in NFPA 805 Sections 2.6.1, 2.6.2 and 2.6.3, because the licensee identified an action to implement the monitoring program as part of the FPP transition to NFPA 805, and included that action as an implementation item which will incorporate the provisions of NFPA 805 in the FPP and would be required by the proposed license condition.”*

### 6.4 Ongoing Compliance Maintenance

The procedures and processes referenced in Section 6.2 continue to implement this requirement of the program.



## 7.0 FIRE SAFETY ANALYSIS

### 7.1 Compliance Requirements

NFPA 805, section 2.7.1.2, Fire Protection Program Design Basis Document states that a:

*“...fire protection program design basis document shall be established based on those documents, analyses, engineering evaluations, calculations, and so forth that define the fire protection design basis for the plant. As a minimum, this document shall include fire hazards identification and nuclear safety capability assessment, on a fire area basis, for all fire areas that could affect the nuclear safety or radioactive release performance criteria defined in Chapter 1.”*

### 7.2 FNP Results

The Fire Safety Analysis (FSA) (housed in the ArcPlus™ database) includes a summary of the analysis results for each fire area, broken down as follows:

- Systems and Features – This section is broken up by fire zone with a fire area and contains a list of all fire protection systems and features. Each system or feature is followed by report sections for:
  - Requirements, indicating the source of requirements: NFPA 805 Chapter 3 or 4, Risk, or other.
  - Monitoring, indicating the monitoring scoping/screening results.
- Performance Goals – Summary of how the NFPA 805 performance goals are satisfied for the fire area.
- Nuclear Safety Performance Criteria – Summary of impacts on the criteria, typically fire suppression activities effects.
- Previously Approved Engineering Evaluations – Summary of previous exemptions that were rescinded at transition to NFPA 805, where the engineering evaluation underlying the exemption will be used as a qualitative engineering evaluation under NFPA 805.
- Required Systems – Summary by fire zone of the required fire protection systems and features and whether they are required per engineering evaluation, risk or defense in depth.
- Passive Fire Protection Features – Physical construction, ratings, and program requirements of the fire area boundaries, doors, penetration seals, equipment pedestals, curbs/dikes, spray shields, cable coating, electric raceway fire barrier systems, and drainage.

### 7.3 NRC Acceptance

This document, Farley Drawing A-181805, was developed to satisfy the regulations. There was no specific NRC acceptance provided.

### 7.4 Ongoing Compliance Maintenance

The current information is housed in the ArcPlus™ database. Appendix F provides an informational use printout of the results. This is a user defined report and can be customized by Site Fire Protection Personnel.

## 8.0 REFERENCES

### 8.1 Industry References

- National Fire Protection Association Standards, NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition.
- American Society of Mechanical Engineers (ASME) and American Nuclear Society (ANS) standard ASME/ANS RA-Sa-2009, "Addenda to ASME/ANS RA-S-2008, Standard for Level 1/ Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications," dated February 2, 2009.
- EPRI Report 1006756, Fire Protection Equipment Surveillance Optimization and Maintenance Guide July 2003.
- EPRI Report 1010068, Aggregation of Quantitative Risk Assessment Results, December 2005.
- EPRI Report 1016735, Fire PRA Methods Enhancements Additions, Clarifications, and Refinements to EPRI 1019189, December 2008.
- Nuclear Energy Institute, NEI 00-01, Guidance for Post Fire Safe Shutdown Circuit Analysis, Revision 2, Nuclear Energy Institute (NEI), Washington, DC, May 2009 (ADAMS Accession No. ML091770265).
- NEI 00-01, Guidance for Post-Fire Safe Shutdown Circuit Analysis, Revision 1, January 2005 (ADAMS Accession No. ML050310295).
- NEI 04-02, Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program under 10 CFR 50.48(c), Revision 2 April 2008.
- NEI 05-04, Process for Performing Follow on PRA Peer Reviews Using the ASME PRA Standard, Nuclear Energy Institute, Rev. 2.
- NEI 07-12, Fire Probabilistic Risk Assessment (FPRA) Peer Review Process Guidelines, Nuclear Energy Institute, Rev. 0, November 2008.
- NUMARC 91-06, Guidelines for Industry Actions to Assess Shutdown Management.
- NUREG-1449, Final Report, Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States, September 1993.

### 8.2 Nuclear Regulatory Commission

- Regulatory Guide 1.174, An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis, Revision 2 – May 2011 (ADAMS Accession No. ML100910006).
- Voluntary Fire Protection Requirement for Light-Water Reactors; Adoption of NFPA 805 as a Risk-Informed, Performance-Based Alternative, Final Rule, Federal Register, Vol. 69, No. 115, June 16, 2004, pp. 33536–33551.
- NRC Enforcement Policy, Policy Statement: Revision, Federal Register, Vol. 69, No. 115, June 16, 2004, pp. 33684–33685.
- NUREG/CR-6850, EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities, April 2005.

- NUREG-1921, EPRI/NRC-RES Fire Human Reliability Analysis Guidelines, U.S. Nuclear Regulatory Commission, Washington DC, 2012.
- NUREG-2169, EPRI 3002002936, Nuclear Power Plant Fire Ignition Frequency and Non-Suppression Probability Estimation Using the Updated Fire Events Database, United States Fire Event Experience Through 2009, January 2015.
- NUREG-2178, Refining and Characterizing Heat Release Rates from Electrical Enclosures During Fire (RACHELLE-FIRE) — Volume 1: Peak Heat Release Rates and Effect of Obstructed Plume, Final Report (NUREG-2178, Volume 1, EPRI 3002005578), U.S. Nuclear Regulatory Commission, Washington DC, 2016.
- NUREG-2180, Determining the Effectiveness, Limitations, and Operator Response for Very Early Warning Fire Detection Systems in Nuclear Facilities (DELORES-VEWFIRE), U.S. Nuclear Regulatory Commission, Washington DC, 2016.
- Letter, NRC to NEI, Process for Frequently Asked Questions For Title 10 of The Code Of Federal Regulations, Part 50.48(c) Transitions, July 12, 2006 (ADAMS Accession No. ML061660105).
- NRC Regulatory Issue Summary 2007-19: Communicating Clarifications of Staff Positions in RG 1.205 Concerning Issues Identified During Pilot Application of NFPA Standard 805, August 20, 2007 (ADAMS Accession No. ML0611660105).
- Regulatory Guide 1.200, An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities, Revision 2 – March 2009 (ADAMS Accession No. ML090410014).
- Regulatory Guide 1.189, Fire Protection for Nuclear Power Plants, Revision 2, October 2009 (ADAMS Accession No. ML092580550).
- Regulatory Guide 1.205, Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants, Revision 1, December 2009 (ADAMS Accession No. ML092730314).
- NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition, Chapter 9.5.1.2, Risk-Informed, Performance-Based Fire Protection Program, Revision 0, December 2009 (ADAMS Accession No. ML092590527).
- NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for NPP: LWR Edition Chapter 19.1, Determining the Technical Adequacy of PRA Results for Risk-Informed License Amendment Requests After Initial Fuel Load, Revision 3, dated September 2012 (ADAMS Accession No. ML12193A107).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Frequently Asked Question 07-0030 on Establishing Recovery Actions," dated February 4, 2011 (ADAMS Accession No. ML110070485).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Frequently Asked Question 07-0038 on Lessons Learned on Multiple Spurious Operations," dated February 3, 2011 (ADAMS Accession No. ML110140242).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Standard 805 Frequently Asked Question 07-

0039 Incorporation of Pilot Plant Lessons Learned- Table B-2," dated January 15, 2010 (ADAMS Accession No. ML091320068).

- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association 805 Frequently Asked Question 07-0040 on Non-Power Operations Clarifications," dated August 11, 2008 (ADAMS Accession No. ML082200528).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Standard 805 Frequently Asked Question 08-0044 on Main Feedwater Pump Oil Spill Fires," (ADAMS Accession No. ML092110516).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association 805 Frequently Asked Question 08-0048 Revised Fire Ignition Frequencies," dated September 1, 2009 (ADAMS Accession No. ML092190457).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Standard 805 Frequently Asked Question 08-0050 on Manual Non-Suppression Probability," (APAMS Accession No. ML092320044).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Closure of National Fire Protection Association 805 Frequently Asked Question 08-0052 Transient Fires - Growth Rates and Control Room Non-Suppression," dated August 4, 2009 (ADAMS Accession No. ML092120501).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Frequently Asked 08-0054 on Demonstrating Compliance with Chapter 4 of National Fire Protection Association 805," dated February 17, 2011 (ADAMS Accession No. ML110140183).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Standard 805 Frequently Asked Question 10-0059: National Fire Protection 805 Monitoring Program," dated March 19, 2012 (ADAMS Accession No. ML120750108).
- Klein, Alexander R., U.S. Nuclear Regulatory Commission, memorandum to file, "Close-out of National Fire Protection Association Standard 805 Frequently Asked Question 12-0062 on Updated Final Safety Analysis Report (UFSAR) Content," (ADAMS Accession No. ML121980557).

### 8.3 Licensing

- Ajluni, M. J., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant License Amendment to Adopt NFPA -805 Performance Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants (2001 Edition)," dated September 25, 2012, (ADAMS Accession No ML12279A235).
- Ajluni, M. J., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Supplemental Information Regarding License Amendment Request For Transition to 10 CFR 50.48(c) - NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," dated December 20, 2012, (ADAMS Accession Nos ML12359A050 and ML12359A051).

- Brown, Eva A, U.S. Nuclear Regulatory Commission, letter to C. R. Pierce, Southern Nuclear Operating Company, "Joseph M. Farley Nuclear Plant, Units 1 And 2 - Request for Additional Information Concerning Voluntary Fire Protection Risk Initiative Request (TAC Nos. ME9741 and ME9742)," dated July 8, 2013, (ADAMS Accession No. ML13176A093).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated September 16, 2013, (ADAMS Accession Nos. ML14038A019 and ML14038A037).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated October 30, 2013, (ADAMS Accession Nos. ML13305A105).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated November 12, 2013, (ADAMS Accession No. ML13318A027).
- Williams, Shawn, U.S. Nuclear Regulatory Commission, letter to C. R. Pierce, Southern Nuclear Operating Company, "Joseph M. Farley Nuclear Plant, Unit Nos. 1 and 2 - Request for Additional Information Concerning Voluntary Fire Protection Risk Initiative Request (TAC Nos. ME9741 and ME9742)," dated March 28, 2014 (ADAMS Accession No. ML14073A053).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated April 23, 2014, (ADAMS Accession No. ML14114A550).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10CFR50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated May 23, 2014, (ADAMS Accession No. ML14147A368).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10CFR50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated July 3, 2014, (ADAMS Accession No. ML14189A144).



- Williams, Shawn, U.S. Nuclear Regulatory Commission, letter to C. R. Pierce, Southern Nuclear Operating Company, "Joseph M. Farley Nuclear Plant Unit Nos. 1 and 2 - Request for Additional Information Regarding License Amendment Request to Adopt National Fire Protection Association Standard 806 (TAC Nos. ME9741 and ME9742)," dated July 11, 2014 (ADAMS Accession No. ML14176A070).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated August 11, 2014, (ADAMS Accession No. ML14223A646).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated August 29, 2014 (ADAMS Accession No. ML14246A523).
- Pierce, Charles R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant Response to Request for Additional information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated October 13, 2014 (ADAMS Accession No. ML14288A671).
- Pierce, C.R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, "Joseph M. Farley Nuclear Plant, Response to Request for Additional Information Regarding License Amendment Request for Transition to 10 CFR 50.48(c) - NFPA 805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated January 16, 2015 (ADAMS Accession No. ML15016A199).
- U.S. Nuclear Regulatory Commission, "Summary of Site Audit to Support the Review of a License Amendment Request for Joseph M. Farley Nuclear Plant, Units 1 and 2, to transition to the National Fire Protection Association Standard 805 Fire Protection Licensing Basis, (TAC Nos. ME9741, ME9742)," dated February 12, 2015 (ADAMS Accession No. ML15043A459).
- Williams, Shawn, U.S. Nuclear Regulatory Commission, letter to C. R. Pierce, Southern Nuclear Operating Company, "Joseph M. Farley Nuclear Plants, Units 1 and 2 – Issuance of Amendment Regarding Transition to a Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10CFR50.49(c)" and Attached Safety Evaluation, dated March 10, 2015 (ADAMS Accession No. ML14308A048).
- Pierce, C.R., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, " Joseph M. Farley Nuclear Plant Supplemental License Amendment Request to Revise Existing Facility Operating License Commitments Regarding NFPA-805 Performance Based Standard for Fire Protection for Light Water Reactor Generating Plants," dated April 25, 2016 (ADAMS Accession No. ML16120A294)
- Williams, Shawn, U.S. Nuclear Regulatory Commission, letter to C. R. Pierce, Southern Nuclear Operating Company, "Joseph M. Farley Nuclear Plant, Units 1 and 2 –

Issuance of Amendments Related to NFPA 805 Supplement,” dated October 17, 2016 (ADAMS Accession No. ML16232A000)

- Meier, M., Southern Nuclear Operating Company, letter to U.S. Nuclear Regulatory Commission, “Joseph M. Farley Nuclear Plants Units 1 and 2 NFPA-805 Transition Due Date Extension,” dated August 11, 2017 (ADAMS Accession No. ML17226A291)
- Williams, Shawn, U.S. Nuclear Regulatory Commission, letter to J. J. Hutto, Southern Nuclear Operating Company, “Joseph M. Farley Nuclear Plant, Units 1 and 2 – Issuance of Amendments Related to NFPA 805 Supplement,” Dated November 1, 2017 (ADAMS Accession No. ML17269A166)

## 8.4 Site-Specific References

### 8.4.1 Calculations

- Design Input Record 05058-DIR-14, R0, Addition of Systems Q1D21L001 and Q2D21L001 as Required for NFPA 805
- F-RIE-FIREPRA-U00-001, Plant Partitioning and Fire Ignition Frequency for Farley Fire PRA
- F-RIE-FIREPRA-U00-002, Equipment Selection for Farley Fire PRA
- F-RIE-FIREPRA-U00-003, Farley Fire PRA Cable Selection and Detailed Circuit Failure Analysis
- F-RIE-FIREPRA-U00-005, Fire PRA Logic Model for Farley Nuclear Plants
- F-RIE-FIREPRA-U00-008A, Fire Probabilistic Risk Assessment Fire Scenario Report
- F-RIE-FIREPRA-U00-008B, Evaluation of the Control Room Abandonment Times at Farley Nuclear Plant
- F-RIE-FIREPRA-U00-008C, Hot Gas Layer and Multi-Compartment Analysis
- F-RIE-FIREPRA-U00-008D, Farley Fire Modeling Treatments Report
- F-RIE-FIREPRA-U00-010, Farley Fire PRA Circuit Failure Mode Likelihood Analysis
- F-RIE-FIREPRA-U00-012, Human Reliability Analysis for Fire Events
- F-RIE-FIREPRA-U00-013, Seismic Fire Interaction
- F-RIE-FIREPRA-U00-014, Fire Probabilistic Risk Assessment Quantification and Summary Report
- PRA-BC-F-17-002, version 1.0, Seismic Risk Evaluation based on IPEEE and EPRI 2014 Farley Seismic Hazard, September 2017
- PRA-BC-F-18-002, Revision 1, Farley FPIE Asymmetric Cooling Provisional Update, October 2017.
- SE-C051326701-001, Circuit Analysis Calculation for Safe Shutdown/Fire PRA Equipment for Farley
- SE-C051326701-002, FNP Associated Circuits Analysis: Common Power Supply and Common Enclosure
- SE-C051326701-003, FNP NSEL and Safe and Stable Fault Trees
- \*SE-C051326701-004, Expert Panel for Addressing Multiple Spurious Actuations



- SE-C051326701-005, FNP Units 1 and 2 NFPA 805 Non-Power Operation Review
- \*SE-C051326701-006, Table B-2 Nuclear Safety Capability Assessment Methodology Review
- \*SE-C051326701-008, NFPA 805 Fire Risk Evaluations
- SE-C051326701-009, Evaluate RCP Shut Down Seals for NFPA 805 MSO Scenarios
- \*SE-C051326701-010, NFPA 805 NSCA Transition – Table B-3 – Fire Area Review
- SE-C051326701-011, Recovery Action Feasibility
- \*SE-C051326701-012, NFPA 805 Defense in Depth (DID) Recovery Actions
- SM-C051326701-001, NFPA 600 Code Compliance Review
- \* SM-C051326701-002, NFPA 805 Engineering Equivalency Evaluation Calculation
- \*SM-C051326701-003, NFPA 805 Transition - B-1 Table Calculation
- \*SM-C051326701-004, NFPA 805 Transition Licensing Action Review
- SM-C051326701-005, NEI-00-01 Instrument Sensing Line Evaluation
- SM-C051326701-006, Identify Regulatory Fire Barriers
- SM-C051326701-007, NFPA Code Compliance review
- SM-C051326701-008, Definition of Power Block
- SM-C051326701-009, Penetration Seal Development and Bounding Criteria
- SM-C051326701-010, NFPA 805 Radiological Release Calculation
- SM-C051326701-011, Fire Suppression Effects Analysis
- \*SM-C051326701-012, Required Systems and Features
- \*SM-C051326701-013, NFPA 805 Implementation EEEE
- SM-C051326701-014, NFPA 805 Qualitative Monitoring Evaluation
- SM-C051326701-015, NFPA 805 Quantitative Risk Target Value Evaluation
- SM-C051326701-016, NFPA 805 Monitoring Scoping Evaluation
- SM-C051326701-017, NFPA 805 Monitoring Screening Evaluation

\* denotes calculations used to develop the LAR or other documents that have been made Historical and superseded by information in the **ArcPlus™ database**

#### 8.4.2 Drawings

Pre-Fire Plans are contained in drawing books:

- A-177678, Combustible Load Calculations for Fire Area Hazards Analysis

#### 8.4.3 Procedures

- FNP-0-FPP-2.0, Protected Area Pre-Fire Plans
- FNP-0-FPP-3.0, Owner Controlled Area Pre-Fire Plan

- FNP-0-FPP-4.0, Radioactive Release Plan
- FNP-1-FPP-1.0, Unit 1 Auxiliary Building Pre-Fire Plan
- FNP-1-FPP-2.0, Unit 1 Turbine Building Pre-Fire Plan
- FNP-1-FPP-3.0, Unit 1 Containment Pre-Fire Plan
- FNP-2-FPP-1.0, Unit 2 Auxiliary Building Pre-Fire Plan
- FNP-2-FPP-2.0, Unit 2 Turbine Building Pre-Fire Plan
- FNP-2-FPP-3.0, Unit 2 Containment Pre-Fire Plan
- FNP-1/2-AOP-28.1, Fire or Inadvertent Fire Protection System Actuation in the Cable Spreading Room
- FNP-1/2-AOP-28.2, Fire in the Control Room
- FNP-0-AOP-29.0, Plant Fire
- FNP-0-EIP-13.0, Fire Emergencies
- FNP-0-M-32.0, Master List of Fire Surveillance
- FNP-0-SOP-0.4, Fire Protection Program Administrative Procedure
- FNP-0-UOP-4.0, General Outage Operations Guidance
- NMP-AD-003, Clearance Orders
- NMP-AD-007, Nuclear Insurance Administration – ANI and NRC
- NMP-AD-008, Applicability Determinations
- NMP-OM-002, Shutdown Risk Management
- NMP-ES-035, Fire Protection Program
- NMP-ES-035-001, Fire Protection Program Implementation
- NMP-ES-035-002, Fire Protection Program Notebooks
- NMP-ES-035-003, Fleet Hot Work Instruction
- NMP-ES-035-004, Fire Protection Documentation of Engineering Judgments and Calculations
- NMP-ES-035-005, Fire Protection Alternative Compensatory Measures
- NMP-ES-035-006, Fire Protection Program Impact Screen and Detailed Reviews
- NMP-ES-035-010, Fire Brigade
- NMP-ES-035-GL01, Fire Protection Program Guideline
- NMP-MA-050-F07, Fire Protection Screening
- NMP-TR-425, Fire Drill Program
- NMP-TR-426, Fire Training Program
- MS-MED-009, Fire Brigade Physical Examination Procedure

**APPENDIX TABLE OF CONTENTS**

Appendix A.	OVERVIEW OF THE REGULATORY REQUIREMENTS – 10 CFR 50.48
Appendix B.	POWER BLOCK AND FIRE AREA DEFINITION
Appendix C.	NSCA METHODOLOGY REVIEW
Appendix D.	FUNDAMENTAL FIRE PROTECTION PROGRAM AND MINIMUM DESIGN ELEMENTS
Appendix E.	RECOVERY ACTIONS BY FIRE AREA
Appendix F.	FIRE SAFETY ANALYSIS
Appendix G.	RADIOACTIVE RELEASE RESULTS

## A. OVERVIEW OF THE REGULATORY REQUIREMENTS – 10 CFR 50.48

On July 16, 2004 the NRC amended 10 CFR 50.48, Fire Protection, to add a new subsection, 10 CFR 50.48(c), which establishes alternative FP requirements. 10 CFR 50.48 endorses, with exceptions, the NFPA's NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants – 2001 Edition (NFPA 805), as a voluntary alternative for demonstrating compliance with 10 CFR 50.48 Section (b), Appendix R, and Section (f), Decommissioning.

The voluntary adoption of 10 CFR 50.48(c) by Southern Nuclear Company, Farley Nuclear Plant does not eliminate the need to comply with 10 CFR 50.48(a) and 10 CFR 50, Appendix A, GDC 3, Fire Protection. The NRC addressed the overall adequacy of the regulations during the promulgation of 10 CFR 50.48(c) (Reference FR Notice 69 FR 33536 dated June 16, 2004, ML041340086).

*“NFPA 805 does not supersede the requirements of GDC 3, 10 CFR 50.48(a), or 10 CFR 50.48(f). Those regulatory requirements continue to apply to licensees that adopt NFPA 805. However, under NFPA 805, the means by which GDC 3 or 10 CFR 50.48(a) requirements may be met is different than under 10 CFR 50.48(b). Specifically, whereas GDC 3 refers to SSCs important to safety, NFPA 805 identifies fire protection systems and features required to meet the Chapter 1 performance criteria through the methodology in Chapter 4 of NFPA 805. Also, under NFPA 805, the 10 CFR 50.48(a)(2)(iii) requirement to limit fire damage to SSCs important to safety so that the capability to safely shut down the plant is ensured is satisfied by meeting the performance criteria in Section 1.5.1 of NFPA 805. The Section 1.5.1 criteria include provisions for ensuring that reactivity control, inventory and pressure control, decay heat removal, vital auxiliaries, and process monitoring are achieved and maintained.*

*This methodology specifies a process to identify the fire protection systems and features required to achieve the nuclear safety performance criteria in Section 1.5 of NFPA 805. Once a determination has been made that a fire protection system or feature is required to achieve the performance criteria of Section 1.5, its design must meet any applicable requirements of NFPA 805, Chapter 3. Having identified the required fire protection systems and features, the licensee selects either a deterministic or performance-based approach to demonstrate that the performance criteria are satisfied. This process satisfies the GDC 3 requirement to design and locate SSCs important to safety to minimize the probability and effects of fires and explosions.” (Reference FR Notice 69 FR 33536 dated June 16, 2004, ML041340086)*

The new rule provides actions that may be taken to establish compliance with 10 CFR 50.48(a), which requires each operating nuclear power plant to have a fire protection program plan that satisfies GDC 3, as well as specific requirements in that section. The transition process described in 10 CFR 50.48(c)(3)(ii) provides, in pertinent parts, that a licensee intending to adopt the new rule must, among other things, “modify the fire protection plan required by paragraph (a) of that section to reflect the licensee’s decision to comply with NFPA 805.” Therefore, to the extent that the contents of the existing FP program plan required by 10 CFR 50.48(a) are inconsistent with NFPA 805, the FP program plan must be modified to achieve compliance with the requirements in NFPA 805. All other requirements of 10 CFR 50.48 (a) and GDC 3 have corresponding requirements in NFPA 805. This document represents the revision to the FP program plan to demonstrate compliance with 10 CFR 50.48(a) and (c).

A comparison of the current requirements in Appendix R with the comparable requirements in Section 3 of NFPA 805 shows that the two sets of requirements are consistent in many respects. This was further clarified in FAQ 07-0032, 10 CFR 50.48(a) and GDC 3 clarification (ML081300697). The following tables provide a cross reference of FP regulations associated with the NFPA 805 Farley Nuclear Plant FP program and applicable industry and current Farley Nuclear Plant documents that address the topic.

**10 CFR 50.48(a)****Table A-1 10 CFR 50.48(a) – Applicability/Compliance Reference**

<b>10 CFR 50.48(a) Section(s)</b>	<b>Applicability/Compliance Reference</b>
(1) Each holder of an operating license issued under this part or a combined license issued under part 52 of this chapter must have a fire protection plan that satisfies Criterion 3 of appendix A to this part. This fire protection plan must:	See below
(i) Describe the overall fire protection program for the facility;	NFPA 805 Section 3.2 DWG A-181805
(ii) Identify the various positions within the licensee's organization that are responsible for the program;	NFPA 805 Section 3.2.2 SM-C051326701-003
(iii) State the authorities that are delegated to each of these positions to implement those responsibilities; and	NFPA 805 Section 3.2.2 SM-C051326701-003
(iv) Outline the plans for fire protection, fire detection and suppression capability, and limitation of fire damage.	NFPA 805 Section 2.7 and Chapters 3 and 4 Appendix F
(2) The plan must also describe specific features necessary to implement the program described in paragraph (a)(1) of this section such as:	See below
(i) Administrative controls and personnel requirements for fire prevention and manual fire suppression activities;	NFPA 805 Sections 3.3.1 and 3.4 SM-C051326701-003
(ii) Automatic and manually operated fire detection and suppression systems; and	NFPA 805 Sections 3.5 through 3.10 and Chapter 4 Appendix F
(iii) The means to limit fire damage to structures, systems, or components important to safety so that the capability to shut down the plant safely is ensured.	NFPA 805 Section 3.3 and Chapter 4 Appendix F
(3) The licensee shall retain the fire protection plan and each change to the plan as a record until the Commission terminates the reactor license. The licensee shall retain each superseded revision of the procedures for 3 years from the date it was superseded.	NFPA 805 Section 2.7.1.1 requires that documentation (Analyses, as defined by NFPA 805 2.4, performed to demonstrate compliance with this standard) be maintained for the life of the plant. QATR, Southern Nuclear Operating Company, Inc., Quality Assurance Topical Report.

**Table A-1 10 CFR 50.48(a) – Applicability/Compliance Reference**

<b>10 CFR 50.48(a) Section(s)</b>	<b>Applicability/Compliance Reference</b>
(4) Each applicant for a design approval, design certification, or manufacturing license under part 52 of this chapter must have a description and analysis of the fire protection design features for the standard plant necessary to demonstrate compliance with Criterion 3 of appendix A to this part.	Not applicable. FNP is licensed under 10 CFR 50.

**General Design Criterion 3**

As stated in the UFSAR, the principal design criteria for Farley Nuclear Plant were developed in consideration of seventy GDC for Nuclear Power Plant Construction Permits proposed by the AEC\* in a proposed rule-making published for 10 CFR Part 50 in the Federal Register of July 11, 1967. \*Atomic Energy Commission was predecessor to NRC.

The following is a discussion of Criterion 3, Fire Protection, from the seventy criteria proposed by the AEC, together with SNC's response indicating its interpretation of an agreement with the intent of the criterion as captured in the UFSAR.

**Table A-2 GDC 3 – Applicability/Compliance Reference**

<b>GDC 3, Fire Protection, Statement</b>	<b>Applicability/Compliance Reference</b>
Structures, systems, and components important to safety shall be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions.	NFPA 805 Chapters 3 and 4 SM-C051326701-003 and Appendix F
Noncombustible and heat resistant materials shall be used wherever practical throughout the unit, particularly in locations such as the containment and control room.	NFPA 805 Sections 3.3.2, 3.3.3, 3.3.4, 3.11.4 SM-C051326701-003
Fire detection and fighting systems of appropriate capacity and capability shall be provided and designed to minimize the adverse effects of fires on structures, systems, and components important to safety.	NFPA 805 Chapters 3 and 4 Appendix F
Firefighting systems shall be designed to assure that their rupture or inadvertent operation does not significantly impair the safety capability of these structures, systems, and components	NFPA 805 Sections 3.4 through 3.10 and 4.2.1 Appendix F

## 10 CFR 50.48(c)

Table A-3 10 CFR 50.48(c) – Applicability/Compliance Reference

10 CFR 50.48(c) Section(s)	Applicability/Compliance Reference
(1) <i>Approval of incorporation by reference.</i> National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805), which is referenced in this section, was approved for incorporation by reference by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 1 CFR part 51.	General Information. NFPA 805 (2001 edition) is the edition used.
(2) Exceptions, modifications, and supplementation of NFPA 805. As used in this section, references to NFPA 805 are to the 2001 Edition, with the following exceptions, modifications, and supplementation:	General Information. NFPA 805 (2001 edition) is the edition used.
(i) <i>Life Safety Goal, Objectives, and Criteria.</i> The Life Safety Goal, Objectives, and Criteria of Chapter 1 are not endorsed.	The Life Safety Goal, Objectives, and Criteria of Chapter 1 of NFPA 805 are not part of the FNP Licensing Basis.
(ii) <i>Plant Damage/Business Interruption Goal, Objectives, and Criteria.</i> The Plant Damage/Business Interruption Goal, Objectives, and Criteria of Chapter 1 are not endorsed.	The Plant Damage/Business Interruption Goal, Objectives, and Criteria of Chapter 1 of NFPA 805 are not part of the FNP Licensing Basis.
(iii) <i>Use of feed-and-bleed.</i> In demonstrating compliance with the performance criteria of Sections 1.5.1(b) and (c), a high-pressure charging/injection pump coupled with the pressurizer power-operated relief valves (PORVs) as the sole fire-protected safe shutdown path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability (i.e., feed-and-bleed) for pressurized-water reactors (PWRs) is not permitted.	Feed and bleed is not utilized as the sole fire-protected safe shutdown methodology. SE-C051326701-010.
(iv) Uncertainty analysis. An uncertainty analysis performed in accordance with Section 2.7.3.5 is not required to support deterministic approach calculations.	Uncertainty analysis was not performed for deterministic methodology.
(v) Existing cables. In lieu of installing cables meeting flame propagation tests as required by Section 3.3.5.3, a flame-retardant coating may be applied to the electric cables, or an automatic fixed fire suppression system may be installed to provide an equivalent level of protection. In addition, the italicized exception to Section 3.3.5.3 is not endorsed.	Electrical cable construction complies with a flame propagation test that was found acceptable to the NRC as documented in NFPA 805 SE
(vi) Water supply and distribution. The italicized exception to Section 3.6.4 is not endorsed. Licensees who wish to use the exception to Section 3.6.4 must submit a request for a license amendment in accordance with paragraph (c)(2)(vii) of this section.	Found acceptable to the NRC as documented in NFPA 805 LAR and SE



Table A-3 10 CFR 50.48(c) – Applicability/Compliance Reference

10 CFR 50.48(c) Section(s)	Applicability/Compliance Reference
<p>(vii) Performance-based methods. Notwithstanding the prohibition in Section 3.1 against the use of performance-based methods, the fire protection program elements and minimum design requirements of Chapter 3 may be subject to the performance-based methods permitted elsewhere in the standard. Licensees who wish to use performance-based methods for these fire protection program elements and minimum design requirements shall submit a request in the form of an application for license amendment under § 50.90. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the performance-based approach;</p> <p>(A) Satisfies the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;</p> <p>(B) Maintains safety margins; and</p> <p>(C) Maintains fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).</p>	<p>The use of performance-based methods for NFPA 805 Chapter 3 was requested. See SM-C051326701-003 Found acceptable to the NRC as documented in NFPA 805 SE</p>
(3) <i>Compliance with NFPA 805.</i>	See below
<p>(i) A licensee may maintain a fire protection program that complies with NFPA 805 as an alternative to complying with paragraph (b) of this section for plants licensed to operate before January 1, 1979, or the fire protection license conditions for plants licensed to operate after January 1, 1979. The licensee shall submit a request to comply with NFPA 805 in the form of an application for license amendment under § 50.90. The application must identify any orders and license conditions that must be revised or superseded, and contain any necessary revisions to the plant's technical specifications and the bases thereof. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the licensee has identified orders, license conditions, and the technical specifications that must be revised or superseded, and that any necessary revisions are adequate. Any approval by the Director or the designee must be in the form of a license amendment approving the use of NFPA 805 together with any necessary revisions to the technical specifications.</p>	<p>The LAR was submitted in accordance with 10 CFR 50.90. The LAR included applicable license conditions, orders, technical specifications/bases that needed to be revised and/or superseded.</p>
<p>(ii) The licensee shall complete its implementation of the methodology in Chapter 2 of NFPA 805 (including all required evaluations and analyses) and, upon completion, modify the fire protection plan required by paragraph (a) of this section to reflect the licensee's decision to comply with NFPA 805, before changing its fire protection program or nuclear power plant as permitted by NFPA 805.</p>	<p>The LAR and transition report summarize the evaluations and analyses performed in accordance with Chapter 2 of NFPA 805.</p>
<p>(4) Risk-informed or performance-based alternatives to compliance with NFPA 805. A licensee may submit a request to use risk-informed or performance-based alternatives to compliance with NFPA 805. The request must be in the form of an application for license amendment under § 50.90 of this chapter. The Director of the Office of Nuclear Reactor Regulation, or designee of the Director, may approve the application if the Director or designee determines that the proposed alternatives:</p> <p>(i) Satisfy the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;</p> <p>(ii) Maintain safety margins; and</p> <p>(iii) Maintain fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).</p>	<p>No risk-informed or performance-based alternatives to compliance with NFPA 805 (per 10 CFR 50.48(c)(4)) were utilized.</p>

## B. POWER BLOCK AND FIRE AREA DEFINITION

### B.1. Power Block Scope

The Fire Safe Shutdown definition of 'Power Block' and 'Plant' as referenced in NFPA 805, Chapter 3 was clarified as follows in NEI 04-02: Power Block and Plant refer to structures that have equipment required for nuclear plant operations. The Power Block scope is documented in FNP Calculation SM-C051326701-008. The following areas bound the Farley Nuclear Plant Power Block.

**Table B-1 Power Block - Plant Scope**

<b>Power Block Structures</b>	<b>Fire Area(s)</b>
Turbine Building (U1 & U2)	1-TB, 2-TB
Reactor CNMT (U1 & U2)	1-055, 2-055
Auxiliary Building (U1 & U2)	Various
Diesel Generator Building	Various
Diesel Fuel Oil Storage Tanks	Yard
DFOST Duct Banks	DU-DGFOST-A, DU-DGFOST-B
Fire Pump House and Tanks	Yard
River Water Intake Structure	067, 068, 069, 070
Circulating Water Towers/Pump/Switchgear Houses	Yard
Low Voltage Switchyard	1-080, 2-080
High Voltage Switchyard	Yard
Service Water Intake Structure	072, 073, 074, 075, 076
Water Treatment Building and Demineralized Water Storage Tank & Well Water Storage Tank	Yard
U1 & U2 Condensate Storage Tanks	1-077, 2-077
U1 & U2 Refueling Water Storage Tanks	1-079, 2-079
U1 & U2 Reactor Makeup Water Storage Tanks	1-078, 2-078
Old Steam Generator Storage Building	Yard
Hydrogen and Nitrogen Pad	Yard
Oxygen Tank Pad	Yard
Radwaste Storage Facility	Yard
Solidification/Dewatering Building	Yard

Table B-1 Power Block - Plant Scope	
Power Block Structures	Fire Area(s)
U1 & U2 Train A Cable Tunnels	1-075, 2-075
U1 & U2 Train B Cable Tunnels	1-076, 2-076
U1 & U2 Train A Service Water Duct Banks	1-DU-DGSWIS-A, 2-DU-DGSWIS-A
U1 & U2 Train B Service Water Duct Banks	1-DU-DGSWIS-B, 2-DU-DGSWIS-B
U1 & U2 Train A River Water Duct Banks	1-DU-DGRWIS-A, 2-DU-DGRWIS-A
U1 & U2 Train B River Water Duct Banks	1-DU-DGRWIS-B, 2 DU-DGRWIS-B
Diesel Bldg. to Valve Box Duct Banks, Train A and Train B	1-DU-DGVB-A, 1-DU-DGVB-B
U1 Service Water Valve Boxes (Train A)	1-SVB1-A, 1-SVB2-A, 1-SVB3-A, 1-SV-B4-A
U2 Service Water Valve Boxes (Train A)	2-SVB1-A, 2-SVB2-A, 2-SVB3-A, 2-SV-B4-A
U1 Service Water Valve Boxes (Train B)	1-SVB1-B, 1-SVB2-B, 1-SVB3-B, 1-SV-B4-B
U2 Service Water Valve Boxes (Train B)	2-SVB1-B, 2-SVB2-B, 2-SVB3-B, 2-SV-B4-B
SWIS to Valve Box Duct Bank Train A and Train B	DU-SWISVB-A, DU-SWISVB-B
Service Water Valve Box Return to Wet Pit, Train A and Train B	SWWPVB-A, SWWPVB-B
Aux Bldg. to Valve Box Duct Banks Train A and Train B	2-DU-ABVB-A, 2-DU-ABVB-B

**B.2. Fire Areas and Fire Zones Descriptions**

<b>Table B-2 FNP – Fire Areas and Fire Zones</b>	
<b>Fire Area Fire Zone</b>	<b>Fire Area Description Fire Zone Description</b>
044	CR COMPLEX & TSC
401	Main Control Room
412	Kitchen
413	Kitchen Storage
414	Toilet
416	Instrument Rack Area
471	Instrument Rack Area
472	Control Room Supply
474	Office
476	Offices
2453	Technical Support Center
2454	Technical Support Center
2455	Technical Support Center
051	CR HVAC EQ RMS
501	Control Room HVAC Equipment Room
2501	Control Room HVAC Equipment Room
056A	DG BLDG SWGR RM TN A
DGB-56A	DG Building Switchgear Room Train A
056B	DG BLDG SWGR RM TN B & FOYER
DGB-56B	DG Building Switchgear Room Train B
DGB-FOY	Foyer
057	DG RM 2C
DGB-2C	Diesel Generator Room 2C
058	DG RM 1B
DGB-1B	Diesel Generator Room 1B
059	DG RM 2B
DGB-2B	Diesel Generator Room 2B
060	DG RM 1C

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
DGB-1C	Diesel Generator Room 1C
061	DG RM 1-2A
DGB-1-2A	Diesel Generator Room 1-2A
062	DAY FUEL TK RM 2C
DGB-DFT-2C	Day Fuel Tank Room 2C
063	DAY FUEL TK RM 1B
DGB-DFT-1B	Day Fuel Tank Room 1B
064	DAY FUEL TK RM 2B
DGB-DFT-2B	Day Fuel Tank Room 2B
065	DAY FUEL TK RM 1C
DGB-DFT-1C	Day Fuel Tank Room 1C
066	DAY FUEL TK RM 1-2A
DGB-DFT-1-2A	Day Fuel Tank Room 1-2A
067	RWIS PMP RM B
RWIS-PR-B	River Water Pump Room B
068	RWIS PMP RM A
RWIS-PR-A	River Water Pump Room A
069	RWIS SWGR RM TN B
RWIS-SG-B	Switchgear Room – Train B
070	RWIS SWGR RM TN A
RWIS-SG-A	Switchgear Room – Train A
071	DG BLDG CORRIDOR
DGB-COR	South hall way
072	SVC WATER PMP RM
SWIS-PR	Service Water Pump Room
073	SWIS BATT RM TN B
SWIS-BAT-B	SWIS Battery Room – Train B
074	SWIS BATT RM TN A
SWIS-BAT-A	SWIS Battery Room – Train A
075	SWIS 5kV SWGR RM B & WEST STAIRS

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
SWIS-SG-B	SWIS 5kV Disconnect Switchgear Room Train B
SWIS-STAIR-W	SWIS West Stairwell
076	SWIS 5kV SWGR RM A & EAST STAIRS
SWIS-SG-A	SWIS 5kV Disconnect Switchgear Room-Train A
SWIS-STAIR-E	SWIS East Stairwell
093	AUX BLDG
0601	Combustible Storage Area
0602	Combustible Storage Area
0603	Combustible Storage Area
2601	Combustible Storage Area
2602	Combustible Storage Area
2603	Combustible Storage Area
1-001	AUX BLDG
0101	Waste Gas Decay Tank Room
0102	Valve Compartment
0103	Corridor
0104	Passageway to Unit 2
0105	1A Recombiner Room
0106	1B Recombiner Room
0108	Waste Monitor Tank Room
0109	Waste Monitor Tank Pump Room
0110	Monitoring Control Panel Room
0111	1A Containment Spray Pump Room
0112	Gallery Access Room
0113	Valve Encapsulation
0114	Pipe Chase
0115	Hallway
0118	Floor Drain Tank Room
0119	Waste Holdup Tank Room
0120	Corridor

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0121	Floor Drain Tank Pump Room
0122	Waste Evaporator Feed Pump Room
0123	Pipe Chase
0124	Valve Encapsulation
0125	1B Containment Spray Pump Room
0126	Pipe Chase
0127	Pipe Chase
0128	RHR Heat Exchanger Room
0129	1B RHR/LHSI Pump Room
0130	Pipe Chase
0131	1A RHR/LHSI Pump Room
0169	Duct and Pipe Chase
0183	Tendon Access Gallery Entrance
0184	100ft Piping Penetration Room
0196	Access to Tendon Access Gallery
0223	121ft Piping Penetration Room
1-004	AUX BLDG
0140	Waste Gas Filter Room
0151	Waste Gas Decay Tank Rooms
0152	Valve Compartment Room
0153	Waste Gas Compressor Room
0154	Waste Evaporator Steam Generator Room
0154A	Valve Compartment Room
0155	Passageway to Unit 2
0156	Recycle Holdup Tank Room
0157	Recycle Holdup Tank Room
0158	Recycle Holdup Tank Room
0159	Recycle Evaporator Feed Pump Room
0160	Hatch Area
0161	Corridor



Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0162	Hallway
0163	WPS Control Panel Room
0164	Laundry and Hot Shower Tank Room
0165	Waste Gas Decay Tank Room
0166	Waste Gas Decay Tank Room
0168	Chemical and Laundry Drain Tank Room
0170	Letdown Heat Exchanger Room
0175	Hallway
0176	Secondary Spent Resin Storage Tank Room
0177	Spent Resin Sluice Pump Room
0178	Spent Resin Sluice Filter Room
0180	Recycle Evaporator Steam Generator Room
0186	Boric Acid Area
0187	Hydro Test Pump Room
0188	Boric Acid Tank Area
0203	Waste Condenser Tanks and Pump Room
0204	Waste Evaporator Package Room
0205	Passageway to Unit 2
0206	Heat Exchanger Room
0207	Hatch Area
0208	Corridor
0209	Hallway
0215	Duct Chase
0216	Valve Compartments Area
0217	Volume Control Tank Room
0218	Chiller Unit Room
0219	Pipe Chase
0220	Valve Compartment Room
0221	Primary Spent Resin Storage Tank Room
0222	Corridor

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0230	Recycle Evaporator Package Room
0231	Sluice Pump Room
0232	Sluice Filter Room
0236	Duct Chase
0237	Corridor
0238	Cask Storage Area
0239	Transfer Canal
0240	Spent Fuel Pool
0253	Valve Compartment
0301	Seal Water Filter Room
0302	Recycle Evaporator Feed Filter Room
0303	Reactor Coolant Filter Room
0304	Waste Monitor Tank Filter Room
0305	Seal Injection Filter Room
0306	Recycle Evaporator Demin Room
0307	Valve Compartment
0308	Demineralizer Room
0309	Hatch Area
0310	Valve Compartment
0311	Recycle Evaporator Concentrates Filter Room
0312	Corridor
0313	Floor Drain Tank and Laundry Tank Filter Room
0314	Waste Evaporator Feed Filter Room
0315	Recycle and Waste Condensates Filter Room
0316	Passageway to Unit 2
0322	Hallway
0323	Sample Room
0324	Primary Chemistry Lab
0325	Counting Room
0326	Radiochemistry Lab

Table B-2 FNP – Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0327	Valve Access Area
0328	BTRS Demineralizer Room
0329	Pipe Tunnel
0330	Chiller Pumps and Surge Tanks Room
0331	Valve Access Area
0332	1A MCC Area
0340	Demineralizer Compartments
0341	Pipe Tunnel – Open to Room 608
0342	Spent Fuel Pool Pumps Room
0348	Cask Wash Area
0351	351 Pump Room
0400	Corridor
0402	Passageway to Unit 2
0403	Hot Instrument Shop
0405	Hatch Room
0406	Decontamination Room
0407	Hot Machine Shop
0408	Hallway
0409	Hallway
0410A	1M Load Center
0410B	1N Load Center
0415	Corridor
0417	Corridor
0418	Aux Bldg and Cont Purge Vent Equipment Room
0419	Demineralizer Hatch Area
0422	Corridor
0423	Valve Compartment
0424	Demineralizer Compartment
0425	Demineralizer Compartment
0426	Demineralizer Compartment

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0427	Demineralizer Compartment
0429	Containment Purge Air Equipment Room
0432	Corridor
0438	Hot Water Heater Room
0441	Hot Tool Room
0445	1A Spent Fuel Pool Heat Exchanger Room
0446	Hallway
0448	SFP Skimmer Pump Room
0449	Demineralizer Room
0450	Valve Compartment
0451	Filter Room
0453	Clean Janitor Room
0454	Lobby
0455	Clean Toilet Room (Men's)
0456	Drying Area
0461	Dosimetry Lab
0462	Nonradioactive Vent Equipment Room
0463	Nitrogen Storage Room
0464	Nitrogen Storage Room
0467	1B Spent Fuel Pool Heat Exchanger Room
0478	1C MCC Room
0480	Health Physics Briefing Room
0481	Health Physics Foreman's Office
0482	Air Sample & Smear Analysis Room
0483	Passageway
0484	Hot Toilet (Women's)
0485	Hot Toilet (Men's)
0486	Survey Preparation Room
0487	Instrument Calibration Room
0488	Instrument Issue & Storage Room

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0489	Waste & Decon. Foreman's Office
0490	Clean Toilet (Women's)
0491	Passageway
0504	Stair Number 6
0505	Spent Fuel Pool Ventilation Equipment Room
0506	CCW Surge Tank Room
0604	Hallway
0605	Blowdown Pumps and Surge Tank Room
0606	Blowdown Filter Room
0607	Blowdown Filter Room
0608	Blowdown Heat Exchanger Room
0609	Storage Area
0610	Valve Compartment Room
1-005	AUX BLDG
0172	Hallway
0173	1C Charging/HHSI Pump Room
0174	1B Charging/HHSI Pump Room
0181	1A Charging/HHSI Pump Room
0182	Contaminated Storage Room
1-006	AUX BLDG
0185	CCW Heat Exchanger Room
0189	Plant Heating Equipment Room
0190	1E MCC Panel Room
0191	1A Auxiliary Feedwater Pump Room
0192	1B Auxiliary Feedwater Pump Room
0193	Turbine-Driven AFW Pump Room
0194	Lower Equipment Room
0195	Access Hatch Room
0199	Phosphate Tank and Pump Area
0241	Main Steam and Feedwater Valve Room

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0242	Pipe Chase
0243	Pipe Chase
1-008	AUX BLDG CBL CHASE, RM 116
0116	Cable Chase
1-009	AUX BLDG CBL CHASE, RMS 117 & 246
0117	Cable Chase
0246	Cable Chase
1-012	HLWAY & LOCAL HOT SHTDWN PNL RM
0254	Hallway / Hot Shutdown Panel Room
1-013	AUX BLDG CBL CHASE RMS 227, 300, 465, 466 & 500
0227	Cable Chase
0300	Cable Chase
0465	Cable Chase
0466	Cable Chase
0500	Cable Chase
1-014	COMPTR RM and DUCT CHASE
0201	Computer Room
0255	Duct Chase
1-015	COMMUNICATION RM
0202	Communication Room
1-016	AUX BLDG BATT RM
0212	1B Battery Room
1-017	AUX BLDG BATT RM
0214	1A Battery Room
1-018	AUX BLDG DC SWGR RM
0224	1A DC Switchgear Room
1-019	AUX BLDG DC SWGR RM
0226	1B DC Switchgear Room
1-020	AUX BLDG
0210	Corridor



Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
0211	Corridor
0213	Battery Service Room
0225	1C Battery Charger Room
0228	Corridor
0234	Hallway
0244	Area Above Battery Room 1B
0245	Area Above Battery Room 1A
1-021	AUX BLDG SWGR RMS
0229	Train B 4kV/600V Switchgear Room
0233	Train B 4kV/600V Switchgear Room
1-023	AUX BLDG SWGR RM
0235	Rod Control System Cabinets Room
1-030	AUX BLDG CABL CHASE RMS 249 & 252
0249	Cable Chase (Unit 1 Train B Cable Tunnel)
0252	Cable Chase (Unit 1 Train B Cable Tunnel)
1-031	AUX BLDG CABL CHASE RMS 250 & 251
0250	Cable Chase (Unit 1 Train A Cable Tunnel)
0251	Cable Chase (Unit 1 Train A Cable Tunnel)
1-034	TN B ELEC PEN RM & FIL SYS
0317	Penetration Rm and Filtration System Equipment Rm
0334	Electrical Penetration Room Train B
1-035	TN A ELEC PEN RMS
0333	Electrical Penetration Room
0347	Electrical Penetration Room Train A
1-039	FUEL STRG & STRG RACK PITS
0349	New Fuel Storage Racks
0350	New Fuel Storage Racks
0459	New Fuel Storage Room
1-040	CABLE SPREADING RM
0318	Cable Spreading Room

Table B-2 FNP – Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
1-041	TN A SWGR & LOAD CTR RMS
0335	Train A 4kV/600V Switchgear Room
0343	Train A 4kV/600V Switchgear Room
0346	CRDM Control System Cabinets Room
1-042	AUX BLDG HLWAYS & COORIDOR
0319	Corridor
0339	Corridor
0345	Hallway
1-053	AUX BLDG ELEV MACH RM NO 2
0502	Elevator Machine Room No. 2
1-054	AUX BLDG ELEV MACH RM NO 1 and ELEV NO 1
0503	Elevator Machine Rm No. 1 and Elevator No. 1 Shaft
1-055	CONTAINMENT
1-CTMT	Unit 1 Containment
1-075	U1 CABLE TUNNEL TN A
1-075	Unit 1 Train A Cable Tunnel
1-076	U1 CABLE TUNNEL TN B
1-076	Unit 1 Train B Cable Tunnel
1-077	COND STRG TK
1-CST	Unit 1 – Condensate Storage Tank
1-078	RX MAKEUP STRG TK
1-RWMT	Unit 1 - Reactor Makeup Storage Tank
1-079	REFUEL WTR STRG TK
1-RWST	Unit 1 - Refueling Water Storage Tank
1-080	LOW VLTG SWYD U1
1-080A	Main Transformer No.3
1-080B	Main Transformer No. 2
1-080C	Main Transformer No. 1
1-080D	Main Transformer (Spare)
1-080E	Unit Aux Transformer No. 1B

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
1-080F	Unit Aux Transformer No. 1A
1-080G	Startup Aux Transformer No. 1A
1-080H	Startup Aux Transformer No. 1B
1-080J	Startup Aux Transformer (Spare)
1-080K	Low Voltage Switchyard - General Area, Unit 1
1-081	TURB BLDG BATT RM
1-081	Unit 1 Turbine Building Battery Room
1-082	TURB BLDG LUBE OIL STRG RM
1-082	Unit 1 Turbine Building Lube Oil Storage Room
1-083	TURB BLDG OIL STRG RM
1-083	Unit 1 Turbine Building Oil Storage Room
1-086	TURB BLDG AUX STM GEN
1-086	Unit 1 Auxiliary Steam Generator
1-090	AUX BLDG COMB STRG & FILTER RM
0107	Storage Room
1-092	DRUM STATION & STRG & COMB STRG RM
0420	Drum Storage Room
0421	Drumming Station Room
1-094	AUX BLDG COMB STRG RM
0167	Storage Room
1-095	AUX BLDG STRG RM
0171	Storage Area
1-096	AUX BLDG COMB STRG RM
0179	Valve Room
1-097	FILTER HTCH RM & COMB STRG AREA
0404	Filter Hatches Room
1-098	CASK WASH STRG & COMB STRG
0447	Caskwash Storage Room
1-DU-DGRWIS-A	DG BLDG to RWIS DUCTBANK, U1 TN A
1-DU-DGRWIS-A	Diesel Building to RWIS Ductbank, Unit 1, Train A

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
1-DU-DGRWIS-B	DG BLDG to RWIS DUCTBANK, U1 TN B
1-DU-DGRWIS-B	Diesel Building to RWIS Ductbank, Unit 1, Train B
1-DU-DGSWIS-A	DG BLDG to SWIS DUCTBANK, U1 TN A
1-DU-DGSWIS-A	Diesel Building to SWIS Ductbank, Unit 1, Train A
1-DU-DGSWIS-B	DG BLDG to SWIS DUCTBANK, U1 TN B
1-DU-DGSWIS-B	Diesel Building to SWIS Ductbank, Unit 1, Train B
1-DU-DGVB-A	DG BLDG to VLV BOX DCTBNKS, TN A
1-DU-DGVB-A	Diesel Building to Valve Box Ductbanks, Train A
1-DU-DGVB-B	DG BLDG to VLV BOX DCTBNKS, TN B
1-DU-DGVB-B	Diesel Building to Valve Box Ductbanks, Train B
1-EMBED-AB	AUX BLDG EMBEDDED CONDUIT
1-EMBED-AB	Embedded Conduit, Auxiliary Building, Unit 1
1-S01	STAIRWELL NO 1
1-S01	STAIRWAY #1
1-S02	STAIRWELL NO 2
1-S02	STAIRWAY #2
1-S08	STAIRWELL NO 8
1-S08	STAIRWAY #8
1-S10	STAIRWELL NO 10
1-S10	STAIRWAY #10
1-SVB1-A	SVC WTR VLV BOX 1-SVB1 TN A
1-SVB1-A	Service Water Valve Box, 1-SVB1-A
1-SVB1-B	SVC WTR VLV BOX 1-SVB1 TN B
1-SVB1-B	Service Water Valve Box, 1-SVB1-B
1-SVB2-A	SVC WTR VLV BOX 1-SVB2 TN A
1-SVB2-A	Service Water Valve Box, 1-SVB2-A
1-SVB2-B	SVC WTR VLV BOX 1-SVB2 TN B
1-SVB2-B	Service Water Valve Box, 1-SVB2, Train B
1-SVB3-A	SVC WTR VLV BOX 1-SVB3 TN A
1-SVB3-A	Service Water Valve Box, 1-SVB3, Train A

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
1-SVB3-B	SVC WTR VLV BOX 1-SVB3 TN B
1-SVB3-B	Service Water Valve Box, 1-SVB3, Train B
1-SVB4-A	SVC WTR VLV BOX 1-SVB4 TN A
1-SVB4-A	Service Water Valve Box, 1-SVB4, Train A
1-SVB4-B	SVC WTR VLV BOX 1-SVB4 TN B
1-SVB4-B	Service Water Valve Box, 1-SVB4, Train B
1-TB	TURBINE BLDG GENERAL AREA
1-084	Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs
1-085	Turbine Building, General Area
1-087	Steam Generator Feed Pumps A & B
1-088	Turbine Building Switchgear
<b>UNIT 2</b>	
2-001	AUX BLDG
2101	Waste Decay Tank Room
2102	Valve Compartment
2103	Corridor
2104	Passageway to Unit 1
2105	2B Recombiner Room
2106	2A Recombiner Room
2108	Waste Monitor Tank Room
2109	Waste Monitor Tank Pump Room
2110	Monitoring Control Panel Room
2111	2A Containment Spray Pump Room
2112	Gallery Access Room
2113	Valve Encapsulation
2114	Pipe Chase
2115	Hallway
2118	Floor Drain Tank Room
2119	Waste Holdup Tank Room

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2120	Corridor
2121	Floor Drain Tank Pump Room
2122	Waste Evaporator Feed Pump Room
2123	Pipe Chase
2124	Valve Encapsulation
2125	2B Containment Spray Pump Room
2126	Pipe Chase
2127	Pipe Chase
2128	RHR Heat Exchanger Room
2129	2B RHR/LHSI Pump Room
2130	Pipe Chase
2131	2A RHR/LHSI Pump Room
2169	Duct and Pipe Chase
2183	Tendon Access Gallery Entrance
2184	100ft Piping Penetration Room
2196	Access to Tendon Access Gallery
2223	121ft Piping Penetration Room
2-004	AUX BLDG
2151	Waste Gas Decay Tank Rooms
2152	Valve Compartment Room
2153	Waste Gas Compressor Room
2154	Waste Evaporator Steam Generator Room
2154A	Valve Room
2155	Passageway to Unit 1
2156	Recycle Holdup Tank Room
2157	Recycle Holdup Tank Room
2158	Recycle Holdup Tank Room
2159	Recycle Evaporator Feed Pump Room
2160	Hatch Area
2161	Corridor



Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2162	Hallway
2163	WPS Control Panel Room
2164	Storage Room
2165	Waste Gas Decay Tank Room
2166	Waste Gas Decay Tank Room
2168	Chemical Drain Tank Room
2170	Letdown Heat Exchanger Room
2175	Hallway
2176	Secondary Spent Resin Storage Tank Room
2177	Spent Resin Sluice Pump Room
2178	Spent Resin Sluice Filter Room
2180	Recycle Evaporator Steam Generator Room
2186	Boric Acid Area
2187	Hydro Test Pump Room
2188	Boric Acid Tanks Area
2203	Waste Condensate Tank and Pump Room
2204	Waste Evaporator Package Room
2205	Passageway to Unit 1
2206	Heat Exchanger Room
2207	Hatch Area
2208	Corridor
2209	Hallway
2215	Duct Chase
2216	Valve Compartment Area
2217	Volume Control Tank Room
2218	Chiller Unit Room
2219	Pipe Chase
2220	Valve Compartment Room
2221	Primary Spent Resin Storage Tank Room
2222	Corridor

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2230	Recycle Evaporator Package Room
2231	Sluice Pump Room
2232	Sluice Filter Room
2237	Corridor
2238	Cask Storage Area
2239	Transfer Canal
2240	Spent Fuel Pool
2253	Valve Compartment
2301	Seal Water Filter Room
2302	Recycle Evaporator Feed Filter Room
2303	Reactor Coolant Filter Room
2304	Waste Monitor Tank Filter Room
2305	Seal Injection Filter Room
2306	Recycle Evaporator Demin Room
2307	Valve Compartment
2308	Demineralizer Room
2309	Hatch Area
2310	Valve Compartment
2311	Recycle Evaporator Concentrates Filter Room
2312	Corridor
2313	Floor Drain Tank Filter Room
2314	Waste Evaporator Feed Filter Room
2315	Recycle and Waste Condensates Filter Room
2316	Passageway to Unit 1
2321	Sample Panel Room
2322	Hallway
2323	Sample Room
2324	Primary Chemistry Lab
2325	Spectrophotometer Lab
2326	Counting Room

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2327	Valve Access Area
2328	BTRS Demineralizer Room
2329	Pipe Tunnel
2330	Chiller Pumps and Surge Tanks Room
2331	Valve Access Area
2332	2A MCC Area
2340	Demineralizer Compartments
2341	Pipe Tunnel
2342	Spent Fuel Pool Pumps Room
2348	Cask Wash Area
2351	Chiller Surge Tank
2402	Passage to Unit 1
2403	Resp Storage & Issue Room/Combust Storage Area
2405	Hatch Area
2406	Tool Room
2408	Hallway
2409	Hallway
2410A	2M Load Center
2418	Aux Bldg and Cont Purge Vent Equip Room
2419	Demineralizer Hatch Area
2422	Corridor
2423	Valve Compartment
2424	Demineralizer Compartment
2425	Demineralizer Compartment
2426	Demineralizer Compartment
2427	Demineralizer Compartment
2429	Containment Purge Air Equipment Room
2431	2431 Duct/Pipe Chase
2445	2A Spent Fuel Pool Heat Exchanger Room
2446	Hallway

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2448	SFP Skimmer Pump Room
2449	Demineralizer Room
2450	Valve Compartment
2451	Filter Room
2467	2B Spent Fuel Pool Heat Exchanger Room
2478	2C MCC Room
2504	Stair Number 6
2505	Spent Fuel Pool Ventilation Equipment Room
2604	Hallway
2605	Blowdown Pumps and Surge Tank Room
2606	Blowdown Filter Room
2607	Blowdown Filter Room
2608	Blowdown Heat Exchanger Room
2609	Storage Area
2610	Valve Compartment Room
2-005	AUX BLDG
2171	Storage Area
2172	Hallway
2173	2C Charging/HHSI Pump Room
2174	2B Charging/HHSI Pump Room
2181	2A Charging/HHSI Pump Room
2182	Contaminated Storage Room
2-006	AUX BLDG
2185	CCW Heat Exchanger Room
2189	Plant Heating Equipment Room
2190	2E MCC Panel Room
2191	2A Auxiliary Feedwater Pump Room
2192	2B Auxiliary Feedwater Pump Room
2193	Turbine-Driven AFW Pump Room
2194	Lower Equipment Room

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2195	Access Hatch Area
2199	Phosphate Tank and Pump Area
2236	Duct Chase
2241	Main Steam and Feedwater Valve room
2242	Pipe Chase
2243	Pipe Chase
2-008	AUX BLDG CABLE CHASE RM 2116
2116	Cable Chase
2-009	AUX BLDG CBLE CHASE RMS 2117 & 2246
2117	Cable Chase
2246	Cable Chase
2-012	HALLWAY & LOCAL HOT SHUTDOWN PNL RM
2254	Walkway / Hot Shutdown Panel Room
2-013	AUX BLDG CABLE CHASE, RMS 227, 300, 465, 466 & 500
2227	Cable Chase
2300	Cable Chase
2466	Cable Chase
2500	Cable Chase
2-014	CMPTR RM & DUCT CHASE
2201	Computer Room
2-015	COMMUNICATION RM
2202	Hot Shutdown Panel Room
2-016	AUX BLDG BATT RM
2212	2B Battery Room
2-017	AUX BLDG BATT RM
2214	2A Battery Room
2-018	AUX BLDG DC SWGR RM
2224	2A DC Switchgear Room
2-019	AUX BLDG DC SWGR RM
2226	2B DC Switchgear Room

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2-020	AUX BLDG
2210	Corridor
2211	Corridor
2213	Battery Service Room
2225	2C Battery Charger Room
2228	Corridor
2234	Hallway
2244	Area Above Battery Room 2B
2245	Area Above Battery Room 2A
2-021	AUX BLDG SWGR RMS
2229	Train B 4kV/600V Switchgear Room
2233	Train B 4kV/600V Switchgear Room
2-023	AUX BLDG SWGR RM
2235	Rod Control System Cabinets Room
2-030	AUX BLDG CABLE CHASE, RMS 2249 & 2252
2249	Cable Chase
2252	Cable Chase
2-031	AUX BLDG CABLE CHASE, RMS 2250 & 2251
2250	Cable Chase
2251	Cable Chase
2-034	TN B ELEC PENT RM & FILTER SYST
2317	Penetration Room and Filtration System Eq Rm
2334	Electrical Penetration Room Train B
2-035	TN A ELEC PENT RMS
2333	Electrical Penetration Room
2347	Electrical Penetration Room Train A
2-039	FUEL STRG & STRG RACK PITS
2349	New Fuel Storage Racks
2350	New Fuel Storage Racks
2459	New Fuel Storage Room



Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2-040	CABLE SPREADING RM
2318	Cable Spreading Room
2-041	TN A SWGR AND LD CTR RMS
2335	Train A 4kV/600V Switchgear Room
2343	Train A 4kV/600V Switchgear Room
2346	CRDM Control System Cabinets Room
2-042	AUX BLDG HALLWAY AND COORIDOR
2319	Corridor
2339	Corridor
2345	Hallway
2-043	AUX BLDG
2-S12	Stairwell No. 12
2452	Clean Storage Area
2462	Non-Radioactive Ventilation Equipment Room
2463	Nitrogen Storage Room
2464	Nitrogen Storage Room
2502	Control Room Penthouse
2506	CCW Surge Tank Room
2-054	AUX BLDG ELV MACH RM NO 4 & ELV NO 1 SHAFT
2503	Elevator Machinery Room
2-055	CONTAINMENT
2-CTMT	UNIT 2 CONTAINMENT
2-075	U2 CABLE TUNN TN A
2-075	Unit 2 Cable Tunnel - Train A
2-076	U2 CABLE TUNN TN B
2-076	Unit 2 Cable Tunnel - Train B
2-077	COND STRG TK
2-CST	Condensate Storage Tank
2-078	RX MAKEUP WTR STRG TK
2-RWMT	Reactor Makeup Storage Tank

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2-079	REFUEL WTR STRG TK
2-RWST	Refueling Water Storage Tank
2-080	LOW VOLT SWYD U2
2-080A	Main Transformer No. 3
2-080B	Main Transformer No. 2
2-080C	Main Transformer No. 1
2-080D	Main Transformer (Spare)
2-080E	Unit Aux Transformer (Spare Cubicle)
2-080F	Unit Aux Transformer 2B
2-080G	Startup Aux Transformer No. 2B
2-080H	Startup Aux Transformer No. 2A
2-080K	Low Voltage Switchyard - General Area, Unit 2
2-081	TURB BLDG BATT RM
2-081	Turbine Building Battery Room
2-089	LUB OIL AND COMB STRG RM
2150	Lube Oil Storage Room
2-090	AUX BLDG COMB STRG & FIL UNIT RM
2107	Storage Room
2-092	DRUM STA & STRG & COMB STRG RM
2420	Drum Storage Room
2421	Drumming Station Room
2-094	AUX BLDG COMB STRG RM
2167	Storage Room
2-096	AUX BLDG COMB STRG RM
2179	Valve Room
2-097	FLTR HTCH RM & COMB STRG AREA
2404	Filter Hatches Room
2-098	CASKWSH STRG & COMB STRG AREA
2447	Cask Wash Storage Room
2-DU-ABVB-A	AUX BLDG TO VLV BOX DUCTBANKS, TN A

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2-DU-ABVB-A	Aux Building to Valve Box Ductbanks, Train A
2-DU-ABVB-B	AUX BLDG TO VLV BOX DUCTBANKS, TN B
2-DU-ABVB-B	Aux Building to Valve Box Ductbanks, Train B
2-DU-DGRWIS-A	DG BLDG TO RWIS DUCTBANK, U2 TN A
2-DU-DGRWIS-A	Diesel Building to RWIS Ductbank, Unit 2, Train A
2-DU-DGRWIS-B	DG BLDG TO RWIS DUCTBANK, U2 TN B
2-DU-DGRWIS-B	Diesel Building to RWIS Ductbank, Unit 2, Train B
2-DU-DGSWIS-A	DG BLDG TO SWIS DUCTBANK, U2 TN A
2-DU-DGSWIS-A	Diesel Building to SWIS Ductbank, Unit 2, Train A
2-DU-DGSWIS-B	DG BLDG TO SWIS DUCTBANK, U2 TN B
2-DU-DGSWIS-B	Diesel Building to SWIS Ductbank, Unit 2, Train B
2-EMBED-AB	AUX BLDG EMBED CONDUIT
2-EMBED-AB	Embedded Conduit, Auxiliary Building, Unit 2
2-S01	STAIRWELL NO 1
2-S01	STAIRWAY #1
2-S02	STAIRWEILL NO 2
2-S02	STAIRWAY #2
2-S08	STAIRWELL NO 8
2-S08	STAIRWAY #8
2-S10	STAIRWELL NO 10
2-S10	STAIRWAY #10
2-SVB1-A	SVC WTR VLV BOX 2-SVB1, TN A
2-SVB1-A	Service Water Valve Box, 2-SVB1-A
2-SVB1-B	SVC WTR VLV BOX 2-SVB1, TN B
2-SVB1-B	Service Water Valve Box, 2-SVB1-B
2-SVB2-A	SVC WTR VLV BOX 2-SVB2, TN A
2-SVB2-A	Service Water Valve Box, S-SVB2-A
2-SVB2-B	SVC WTR VLV BOX 2-SVB2, TN B
2-SVB2-B	Service Water Valve Box, S-SVB2-B
2-SVB3-A	SVC WTR VLV BOX 2-SVB3, TN A

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
2-SVB3-A	Service Water Valve Box, 2-SVB3-A
2-SVB3-B	SVC WTR VLV BOX 2-SVB3, TN B
2-SVB3-B	Service Water Valve Box, 2-SVB3-B
2-SVB4-A	SVC WTR VLV BOX 1-SVB4, TN A
2-SVB4-A	Service Water Valve Box, 2-SVB4-A
2-SVB4-B	SVC WTR VLV BOX 1-SVB4, TN B
2-SVB4-B	Service Water Valve Box, 2-SVB4-B
2-TB	TURBINE AREA GENERAL AREA
2-084	Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs
2-085	Turbine Building, General Area
2-087	Steam Generator Feed Pumps A & B
2-088	Turbine Building Switchgear Area
ABRF	CR A/C, U1 & U2
ABRF1-U1	Control Room Air Conditioner/Unit 1 Side
ABRF2-U1	Control Room Air Conditioner/Unit 2 Side
DU-DGFOST-A	DG FUEL OIL STRG TK DUCTBANK, TN A
DU-DGFOST-A	Diesel Fuel Oil Storage Tank Ductbank, Train A
DU-DGFOST-B	DG FUEL OIL STRG TK DUCTBANK, TN B
DU-DGFOST-B	Diesel Fuel Oil Storage Tank Ductbank, Train B
DU-SWISVB-A	SWIS TO VLV BOX DUCTBANK, TN A
DU-SWISVB-A	SWIS to Valve Box Ductbank, Train A
DU-SWISVB-B	SWIS TO VLV BOX DUCTBANK, TN B
DU-SWISVB-B	SWIS to Valve Box Ductbank, Train B
EMBED-DGB	DG BLDG EMBED CONDUIT
EMBED-DGB	Embedded Conduit, Diesel Generator Building
SWWPVB-A	SVC WTR VLV BOX RTRN TO WET PIT, TN A
SWWPVB-A	Service Water Valve Box Return to Wet Pit, Train A
SWWPVB-B	SVC WTR VLV BOX RTRN TO WET PIT, TN B
SWWPVB-B	Service Water Valve Box Return to Wet Pit, Train B

Table B-2 FNP — Fire Areas and Fire Zones

Fire Area Fire Zone	Fire Area Description Fire Zone Description
TBRF	TB ROOF HVAC RM, U1&2
TBRF1	Turbine Building Roof HVAC Room, Unit 1
TBRF2	Turbine Building Roof HVAC Room, Unit 2
YARD	YD AREA MAIN POWER BLOCK
1-CST-PT	Access Hatch Room to CST Pipe Trench
1-SWSURTK	Service Water Surge Tank
2-CST-PT	Aux Building to CST Pipe Trench
2-RWST-PT	Aux Building to RWST Pipe Trench
2-SWSURTK	Service Water Surge Tank
CT-SWGR 1A	Cooling Tower 1A
CT-SWGR 1B	Cooling Tower 1B
CT-SWGR 1C	Cooling Tower 1C
CT-SWGR 2A	Cooling Tower 2A
CT-SWGR 2B	Cooling Tower 2B
CT-SWGR 2C	Cooling Tower 2C
FOST	Fuel Oil Storage Tank
HV-SWYD	High Voltage Switchyard
OUTSIDE	General Outside Locations in Main Power Block
UNGND	Underground Ductbanks Between Various Structures
YARD-SWIS	YD AREA NEAR SWIS
CO2-RM	CO2 Bottle Room (SWIS)
SWIS-EXT	SWIS Yard Area

### C. NSCA METHODOLOGY REVIEW

As part of a licensee's application to transition their Fire Protection Program to NFPA 805, they were required to document how their NSCA evaluation was performed in comparison to the NRC endorsed guidance provided in Chapter 3 of NEI 00-01. FNP documented this evaluation in calculation SE-C051326701-006, Table B-2 Nuclear Safety Capability Assessment Methodology Review, and submitted it to the NRC in Attachment B of the NFPA 805 license amendment request dated September 25, 2012. With the reclassification of calculation SE-C051326701-006 as historical, this information has been placed into the ArcPlus™ Fire Safety Analysis (FSA) database.

A copy of the NSCA methodology evaluation was previously provided in this appendix. To avoid duplication of information in two controlled places (i.e., this DBD and the FSA database), this information has been deleted from this appendix. For a copy of the original evaluation, refer to calculation SE-C051326701-006. For a copy of the current evaluation, contact site Fire Protection for a printout from the FSA database.

No additional pages

#### **D. FUNDAMENTAL FIRE PROTECTION PROGRAM AND MINIMUM DESIGN ELEMENTS**

As part of a licensee's application to transition their Fire Protection Program to NFPA 805, they were required to document how their Fire Protection Program met the requirements of NFPA 805 Chapter 3, Fundamental Fire Protection Program and Design Elements. FNP documented this comparison in calculation SM-C051326701-003, NFPA 805 Transition – B-1 Table Calculation, and submitted it to the NRC in Attachment A of the NFPA 805 license amendment request dated September 25, 2012. With the reclassification of calculation SM-C051326701-003 as historical, this information has been placed into the ArcPlus™ Fire Safety Analysis (FSA) database.

A copy of the FPP comparison was previously provided in this appendix. To avoid duplication of information in two controlled places (i.e., this DBD and the FSA database), this information has been deleted from this appendix. For a copy of the original comparison, refer to calculation SM-C051326701-003. For a copy of the current comparison, contact site Fire Protection for a printout from the FSA database.

Revisions to the FNP FPP are controlled under fleet procedure NMP-ES-035-006, Fire Protection Program Impact Screen and Detailed Reviews. See the current revision of FNP FPP drawings, documents, and procedures to see how the NFPA 805 Chapter 3 requirements are being met.

No additional pages



**E. RECOVERY ACTIONS BY FIRE AREA**

Table E-1 documents all Risk Informed Performance Based Recovery Actions for Unit 1.

Table E-2 documents all Risk Informed Performance Based Recovery Actions for Unit 2.

Table E-3 documents all Control Room Abandonment Actions Taken at the Primary Control Station(s).

<b>Table E-1 Unit 1 Recovery Actions</b>			
<b>Fire Area</b>	<b>Equipment ID(s)</b>	<b>Equipment Description(s)</b>	<b>Recovery Action</b>
056A	Q1N11PV3371A	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
056A	Q1R21E0009F	7.5 KVA INVERTER 1F	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
057	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
060	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
072	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
072	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.

Table E-1 Unit 1 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
075	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
076	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-001	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-001	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-004	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-004	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-012	Q1N11PV3371C	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System

Table E-1 Unit 1 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
1-031	Q1N11PV3371A	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
1-041	Q1N11PV3371A/B/C	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
1-075	Q1N11PV3371A/B/C	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
U1 1-075	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-SVB1-B	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-DU-DGSWIS-B	Q1R42B0001B	125V DC Bus 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-SVB1-A	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.

Table E-1 Unit 1 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
1-SVB2-A	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-SVB2-B	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-SVB4-A	Q1R42B0001A	125V DC BUS 1A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-SVB4-B	Q1R42B0001B	125V DC BUS 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
YARD-SWIS	Q1R42B0001B	125V DC Bus 1B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.

Table E-2 Unit 2 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
056A	Q2N11PV3371A	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
059	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
060	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
061	Q2N11PV3371A	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
072	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
072	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
075	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
076	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-008	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.

Table E-2 Unit 2 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
1-021	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-031	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-042	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-075	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
1-DU-DGSWIS-A	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-001	Q2E16H0005A	2A AFW PUMP ROOM COOLER	IF the fire has affected the 2A MDAFW pump room cooler operation, THEN perform the actions of FNP-2-ARP-1.9 Location JK4, 2A MDAFWP RM CLR FAULT, as required.
2-004	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-004	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-005	Q2N11PV3371A	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air to ARVs by Aligning the Emergency Air System by opening N2P18NV073A and N2P18NV074A per FNP-1/2-SOP-62.0, Emergency Air System Risk

Table E-2 Unit 2 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
2-018	Q2N11PV3371C	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
2-041	Q2N11PV3371C	MAIN STEAM ATMOS RELIEF	Operator action to align emergency air system by aligning Emergency Air to Main Steam Atmospheric Relief Valves per FNP-1/2-SOP-62.0 Emergency Air System.
2-DU-ABVB-A	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-DU-ABVB-B	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-DU-DGSWIS-A	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-SVB1-A	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-SVB1-B	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-SVB2-A	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-SVB2-B	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.



Table E-2 Unit 2 Recovery Actions

Fire Area	Equipment ID(s)	Equipment Description(s)	Recovery Action
2-SVB3-A	Q2R42B0001A	125V DC BUS 2A	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-SVB3-B	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
2-DU-DGSWIS-B	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.
YARD-SWIS	Q2R42B0001B	125V DC BUS 2B	Operator action to provide alternate cooling for battery charger room. WHEN a loss of Service Water and/or HVAC to a Battery Charger Room has occurred THEN provide alternate cooling to any affected Battery Charger Room per FNP-1/2-SOP-58.0, Auxiliary Building HVAC System.

Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U1 044	N1B21TI0410	RCS COLD LEG TEMPERATURE INDICATOR TI-410	Monitor parameter at HSP
U1 044	N1B21TI0413	RCS HOT LEG TEMPERATURE INDICATOR TI-413	Monitor parameter at HSP
U1 044	N1B31LI0459Z	PRESSURIZER LEVEL INDICATOR LI-459Z	Monitor parameter at HSP
U1 044	N1B31PI0444Z	HOT SHUTDOWN PANEL PRESSURIZER PRESSURE INDICATOR PI-444Z	Monitor parameter at HSP
U1 044	N1N11LI0477A	STEAM GENERATOR 1A WIDE RANGE LEVEL INDICATOR LI-477A	Monitor parameter at HSP
U1 044	N1N11LI0487A	STEAM GENERATOR 1B WIDE RANGE LEVEL INDICATOR LI-487A	Monitor parameter at HSP
U1 044	N1N11LI0497A	STEAM GENERATOR 1C WIDE RANGE LEVEL INDICATOR LI-497A	Monitor parameter at HSP
U1 044	N1N11PI3371A	MAIN STEAM ATMOSPHERIC RELIEF 1A PRESSURE INDICATOR PI-3371A	Monitor parameter at HSP
U1 044	N1N11PI3371B	MAIN STEAM ATMOSPHERIC RELIEF 1B PRESSURE INDICATOR PI-3371B	Monitor parameter at HSP
U1 044	N1N11PI3371C	MAIN STEAM ATMOSPHERIC RELIEF 1C PRESSURE INDICATOR PI-3371C	Monitor parameter at HSP
U1 044	N1P11LI0515	CONDENSATE STORAGE TANK LEVEL INDICATOR LI-515	Monitor parameter at HSP
U1 044	Q1B13HV0001	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 044	Q1B13HV0002	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 044	Q1B13HV0003	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 044	Q1B13HV0004	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 044	Q1B31L0001B	PRESSURIZER HEATER GROUP 1B DISTRIBUTION PANEL	Transfer control and operate component at HSP
U1 044	Q1B31V0027A	PRESSURIZER PORV ISOLATION	Transfer control and operate component at HSP
U1 044	Q1B31V0027B	PRESSURIZER PORV ISOLATION	Transfer control and operate component at HSP
U1 044	Q1B31V0053	PRESSURIZER PORV	Transfer control and operate component at HSP
U1 044	Q1B31V0061	PRESSURIZER PORV	Transfer control and operate component at HSP
U1 044	Q1C55NI0048A	GAMMA METRICS SOURCE RANGE MONITOR NI-48A	Monitor parameter at HSP
U1 044	Q1E21P0002B	1B CHARGING/HHSI PUMP	Transfer control and operate component at HSP
U1 044	Q1E21P0002C	1C CHARGING/HHSI PUMP	Transfer control and operate component at HSP
U1 044	Q1E21V0253A	LETDOWN ORIFICE ISOLATION 45 GPM	Transfer control and operate component at HSP

Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U1 044	Q1E21V0253B	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U1 044	Q1E21V0253C	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U1 044	Q1E21V0332	SEAL WATER INJECTION (Q1E21HCV0186)	Transfer control and operate component at HSP
U1 044	Q1E21V0336A	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U1 044	Q1E21V0336B	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U1 044	Q1N11PV3371A	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U1 044	Q1N11PV3371B	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U1 044	Q1N11PV3371C	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U1 044	Q1N11V0001A	1A SG MSIV	Transfer control and operate component at HSP
U1 044	Q1N11V0001B	1B SG MSIV	Transfer control and operate component at HSP
U1 044	Q1N11V0001C	1C SG MSIV	Transfer control and operate component at HSP
U1 044	Q1N12V0001A	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235A	Transfer control and operate component at HSP
U1 044	Q1N12V0001B	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235B	Transfer control and operate component at HSP
U1 044	Q1N23HV3228A	TDAFW SUPPLY TO STEAM GENERATOR 1A	Transfer control and operate component at HSP
U1 044	Q1N23HV3228B	TDAFW SUPPLY TO STEAM GENERATOR 1B	Transfer control and operate component at HSP
U1 044	Q1N23HV3228C	TDAFW SUPPLY TO STEAM GENERATOR 1C	Transfer control and operate component at HSP
U1 044	Q1P17P0001A	1A COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U1 044	Q1P17P0001B	1B COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U1 044	Q1P17V0030	CCW TO SEC HXS	Transfer control and operate component at HSP
U1 1-040	N1B21TI0410	RCS COLD LEG TEMPERATURE INDICATOR TI-410	Monitor parameter at HSP
U1 1-040	N1B21TI0413	RCS HOT LEG TEMPERATURE INDICATOR TI-413	Monitor parameter at HSP
U1 1-040	N1B31LI0459Z	PRESSURIZER LEVEL INDICATOR LI-459Z	Monitor parameter at HSP
U1 1-040	N1B31PI0444Z	HOT SHUTDOWN PANEL PRESSURIZER PRESSURE INDICATOR PI-444Z	Monitor parameter at HSP
U1 1-040	N1N11LI0477A	STEAM GENERATOR 1A WIDE RANGE LEVEL INDICATOR LI-477A	Monitor parameter at HSP

Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U1 1-040	N1N11LI0487A	STEAM GENERATOR 1B WIDE RANGE LEVEL INDICATOR LI-487A	Monitor parameter at HSP
U1 1-040	N1N11LI0497A	STEAM GENERATOR 1C WIDE RANGE LEVEL INDICATOR LI-497A	Monitor parameter at HSP
U1 1-040	N1N11PI3371A	MAIN STEAM ATMOSPHERIC RELIEF 1A PRESSURE INDICATOR PI-3371A	Monitor parameter at HSP
U1 1-040	N1N11PI3371B	MAIN STEAM ATMOSPHERIC RELIEF 1B PRESSURE INDICATOR PI-3371B	Monitor parameter at HSP
U1 1-040	N1N11PI3371C	MAIN STEAM ATMOSPHERIC RELIEF 1C PRESSURE INDICATOR PI-3371C	Monitor parameter at HSP
U1 1-040	N1P11LI0515	CONDENSATE STORAGE TANK LEVEL INDICATOR LI-515	Monitor parameter at HSP
U1 1-040	Q1B13HV0001	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 1-040	Q1B13HV0002	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 1-040	Q1B13HV0003	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 1-040	Q1B13HV0004	RX VESSEL HEAD VENT	Transfer control and operate component at HSP
U1 1-040	Q1B31L0001B	PRESSURIZER HEATER GROUP 1B DISTRIBUTION PANEL	Transfer control and operate component at HSP
U1 1-040	Q1B31V0027A	PRESSURIZER PORV ISOLATION	Transfer control and operate component at HSP
U1 1-040	Q1B31V0027B	PRESSURIZER PORV ISOLATION	Transfer control and operate component at HSP
U1 1-040	Q1B31V0053	PRESSURIZER PORV	Transfer control and operate component at HSP
U1 1-040	Q1B31V0061	PRESSURIZER PORV	Transfer control and operate component at HSP
U1 1-040	Q1C55NI0048A	GAMMA METRICS SOURCE RANGE MONITOR NI-48A	Monitor parameter at HSP
U1 1-040	Q1E21P0002B	1B CHARGING/HHSI PUMP	Transfer control and operate component at HSP
U1 1-040	Q1E21P0002C	1C CHARGING/HHSI PUMP	Transfer control and operate component at HSP
U1 1-040	Q1E21V0253A	LETDOWN ORIFICE ISOLATION 45 GPM	Transfer control and operate component at HSP
U1 1-040	Q1E21V0253B	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U1 1-040	Q1E21V0253C	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U1 1-040	Q1E21V0332	SEAL WATER INJECTION (Q1E21HCV0186)	Transfer control and operate component at HSP
U1 1-040	Q1E21V0336A	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U1 1-040	Q1E21V0336B	RWST TO CHARGING PUMP	Transfer control and operate component at HSP

Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U1 1-040	Q1N11PV3371A	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U1 1-040	Q1N11PV3371B	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U1 1-040	Q1N11PV3371C	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U1 1-040	Q1N11V0001A	1A SG MSIV	Transfer control and operate component at HSP
U1 1-040	Q1N11V0001B	1B SG MSIV	Transfer control and operate component at HSP
U1 1-040	Q1N11V0001C	1C SG MSIV	Transfer control and operate component at HSP
U1 1-040	Q1N12V0001A	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235A	Transfer control and operate component at HSP
U1 1-040	Q1N12V0001B	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235B	Transfer control and operate component at HSP
U1 1-040	Q1N23HV3228A	TDAFW SUPPLY TO STEAM GENERATOR 1A	Transfer control and operate component at HSP
U1 1-040	Q1N23HV3228B	TDAFW SUPPLY TO STEAM GENERATOR 1B	Transfer control and operate component at HSP
U1 1-040	Q1N23HV3228C	TDAFW SUPPLY TO STEAM GENERATOR 1C	Transfer control and operate component at HSP
U1 1-040	Q1P17P0001A	1A COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U1 1-040	Q1P17P0001B	1B COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U1 1-040	Q1P17V0030	CCW TO SEC HXS	Transfer control and operate component at HSP
U2 044	N2B21TI0410	RCS COLD LEG TEMPERATURE INDICATOR TI-410	Monitor parameter at HSP
U2 044	N2B21TI0413	RCS HOT LEG TEMPERATURE INDICATOR TI-413	Monitor parameter at HSP
U2 044	N2B31LI0459Z	PRESSURIZER LEVEL INDICATOR LI-459Z	Monitor parameter at HSP
U2 044	N2B31PI0444Z	HOT SHUTDOWN PANEL PRESSURIZER PRESSURE INDICATOR PI-444Z	Monitor parameter at HSP
U2 044	N2N11PI3371A	STEAM GENERATOR 2A ATMOS RELIEF PRESSURE INDICATOR	Monitor parameter at HSP
U2 044	N2N11PI3371B	STEAM GENERATOR 2B ATMOS RELIEF PRESSURE INDICATOR	Monitor parameter at HSP
U2 044	N2N11PI3371C	STEAM GENERATOR 2C ATMOS RELIEF PRESSURE INDICATOR	Monitor parameter at HSP
U2 044	N2P11LI0515	CONDENSATE STORAGE TANK LEVEL INDICATOR LI-515	Monitor parameter at HSP
U2 044	Q2B13HV0001	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 044	Q2B13HV0002	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP

Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U2 044	Q2B13HV0003	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 044	Q2B13HV0004	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 044	Q2B31L0001B	PRESSURIZER HEATER GROUP 2B DISTRIBUTION PANEL	Transfer control and operate component at HSP
U2 044	Q2B31V0027A	PORV BLOCK VALVE	Transfer control and operate component at HSP
U2 044	Q2B31V0027B	PORV BLOCK VALVE	Transfer control and operate component at HSP
U2 044	Q2B31V0053	PRESSURIZER POWER OPERATED RELIEF	Transfer control and operate component at HSP
U2 044	Q2B31V0061	PRESSURIZER POWER OPERATED RELIEF VALVE	Transfer control and operate component at HSP
U2 044	Q2C55NI0048A	GAMMA METRICS SOURCE RANGE MONITOR NI-48A	Monitor parameter at HSP
U2 044	Q2E21P0002B	2B CHARGING PUMP	Transfer control and operate component at HSP
U2 044	Q2E21P0002C	2C CHARGING PUMP	Transfer control and operate component at HSP
U2 044	Q2E21V0253A	LETDOWN ORIFICE ISOLATION 45 GPM	Transfer control and operate component at HSP
U2 044	Q2E21V0253B	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U2 044	Q2E21V0253C	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U2 044	Q2E21V0332	SEAL WATER INJECTION (Q2E21HCV0186)	Transfer control and operate component at HSP
U2 044	Q2E21V0336A	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U2 044	Q2E21V0336B	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U2 044	Q2N11LI0477A	STEAM GENERATOR 2A (WIDE RANGE)	Transfer control and operate component at HSP
U2 044	Q2N11LI0487A	STEAM GENERATOR 2B (WIDE RANGE)	Transfer control and operate component at HSP
U2 044	Q2N11LI0497A	STEAM GENERATOR 2C (WIDE RANGE)	Transfer control and operate component at HSP
U2 044	Q2N11PV3371A	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U2 044	Q2N11PV3371B	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U2 044	Q2N11PV3371C	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U2 044	Q2N11V0001A	2A SG MSIV	Transfer control and operate component at HSP
U2 044	Q2N11V0001B	2B SG MSIV	Transfer control and operate component at HSP

Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U2 044	Q2N11V0001C	2C SG MSIV	Transfer control and operate component at HSP
U2 044	Q2N12V0001A	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235A	Transfer control and operate component at HSP
U2 044	Q2N12V0001B	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235B	Transfer control and operate component at HSP
U2 044	Q2N23HV3228A	TDAFW SUPPLY TO STEAM GENERATOR 1A	Transfer control and operate component at HSP
U2 044	Q2N23HV3228B	TDAFW SUPPLY TO STEAM GENERATOR 1B	Transfer control and operate component at HSP
U2 044	Q2N23HV3228C	TDAFW SUPPLY TO STEAM GENERATOR 1C	Transfer control and operate component at HSP
U2 044	Q2P17P0001A	2A COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U2 044	Q2P17P0001B	2B COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U2 044	Q2P17V0030	CCW TO SEC HXS	Transfer control and operate component at HSP
U2 2-040	N2B21TI0410	RCS COLD LEG TEMPERATURE INDICATOR TI-410	Monitor parameter at HSP
U2 2-040	N2B21TI0413	RCS HOT LEG TEMPERATURE INDICATOR TI-413	Monitor parameter at HSP
U2 2-040	N2B31LI0459Z	PRESSURIZER LEVEL INDICATOR LI-459Z	Monitor parameter at HSP
U2 2-040	N2B31PI0444Z	HOT SHUTDOWN PANEL PRESSURIZER PRESSURE INDICATOR PI-444Z	Monitor parameter at HSP
U2 2-040	N2N11PI3371A	STEAM GENERATOR 2A ATMOS RELIEF PRESSURE INDICATOR	Monitor parameter at HSP
U2 2-040	N2N11PI3371B	STEAM GENERATOR 2B ATMOS RELIEF PRESSURE INDICATOR	Monitor parameter at HSP
U2 2-040	N2N11PI3371C	STEAM GENERATOR 2C ATMOS RELIEF PRESSURE INDICATOR	Monitor parameter at HSP
U2 2-040	N2P11LI0515	CONDENSATE STORAGE TANK LEVEL INDICATOR LI-515	Monitor parameter at HSP
U2 2-040	Q2B13HV0001	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 2-040	Q2B13HV0002	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 2-040	Q2B13HV0003	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 2-040	Q2B13HV0004	REACTOR VESSEL HEAD VENT	Transfer control and operate component at HSP
U2 2-040	Q2B31L0001B	PRESSURIZER HEATER GROUP 2B DISTRIBUTION PANEL	Transfer control and operate component at HSP
U2 2-040	Q2B31V0027A	PORV BLOCK VALVE	Transfer control and operate component at HSP
U2 2-040	Q2B31V0027B	PORV BLOCK VALVE	Transfer control and operate component at HSP



Table E-3 Control Room Abandonment Primary Control Station Actions

Fire Area	Component(s)	Component Description(s)	Action(s)
U2 2-040	Q2B31V0053	PRESSURIZER POWER OPERATED RELIEF	Transfer control and operate component at HSP
U2 2-040	Q2B31V0061	PRESSURIZER POWER OPERATED RELIEF VALVE	Transfer control and operate component at HSP
U2 2-040	Q2C55NI0048A	GAMMA METRICS SOURCE RANGE MONITOR NI-48A	Monitor parameter at HSP
U2 2-040	Q2E21P0002B	2B CHARGING PUMP	Transfer control and operate component at HSP
U2 2-040	Q2E21P0002C	2C CHARGING PUMP	Transfer control and operate component at HSP
U2 2-040	Q2E21V0253A	LETDOWN ORIFICE ISOLATION 45 GPM	Transfer control and operate component at HSP
U2 2-040	Q2E21V0253B	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U2 2-040	Q2E21V0253C	LETDOWN ORIFICE ISOLATION 60 GPM	Transfer control and operate component at HSP
U2 2-040	Q2E21V0332	SEAL WATER INJECTION (Q2E21HCV0186)	Transfer control and operate component at HSP
U2 2-040	Q2E21V0336A	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U2 2-040	Q2E21V0336B	RWST TO CHARGING PUMP	Transfer control and operate component at HSP
U2 2-040	Q2N11LI0477A	STEAM GENERATOR 2A (WIDE RANGE)	Transfer control and operate component at HSP
U2 2-040	Q2N11LI0487A	STEAM GENERATOR 2B (WIDE RANGE)	Transfer control and operate component at HSP
U2 2-040	Q2N11LI0497A	STEAM GENERATOR 2C (WIDE RANGE)	Transfer control and operate component at HSP
U2 2-040	Q2N11PV3371A	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U2 2-040	Q2N11PV3371B	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U2 2-040	Q2N11PV3371C	MAIN STEAM ATMOS RELIEF	Transfer control and operate component at HSP
U2 2-040	Q2N11V0001A	2A SG MSIV	Transfer control and operate component at HSP
U2 2-040	Q2N11V0001B	2B SG MSIV	Transfer control and operate component at HSP
U2 2-040	Q2N11V0001C	2C SG MSIV	Transfer control and operate component at HSP
U2 2-040	Q2N12V0001A	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235A	Transfer control and operate component at HSP
U2 2-040	Q2N12V0001B	TDAFP STEAM SUPPLY ISOLATION VALVE HV3235B	Transfer control and operate component at HSP
U2 2-040	Q2N23HV3228A	TDAFW SUPPLY TO STEAM GENERATOR 1A	Transfer control and operate component at HSP
U2 2-040	Q2N23HV3228B	TDAFW SUPPLY TO STEAM GENERATOR 1B	Transfer control and operate component at HSP

**Table E-3 Control Room Abandonment Primary Control Station Actions**

<b>Fire Area</b>	<b>Component(s)</b>	<b>Component Description(s)</b>	<b>Action(s)</b>
U2 2-040	Q2N23HV3228C	TDAFW SUPPLY TO STEAM GENERATOR 1C	Transfer control and operate component at HSP
U2 2-040	Q2P17P0001A	2A COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U2 2-040	Q2P17P0001B	2B COMPONENT COOLING WATER PUMP	Transfer control and operate component at HSP
U2 2-040	Q2P17V0030	CCW TO SEC HXS	Transfer control and operate component at HSP

## F. FIRE SAFETY ANALYSIS

This Appendix is a printout from the ArcPlus™ database FSA module, which is a living, controlled QA database. This Appendix is provided here for information purposes and is the current information as of the date of the printing on the Appendix. Certain printing options have been selected by the site to best represent the required information for users. To obtain the latest current revision of this Appendix reflecting the most current Farley Fire Protection Design and Licensing Basis, contact site Fire Protection. Every effort was made to avoid duplication of information in this Appendix with information contained in controlled calculations and analyses.

The ARCPlus FSA Module has the Fire Zone population as a one to one connection between room number and Fire Zone as described in the Fire PRA Plant partitioning calculation, F-RIE-FIREPRA-U00-001. For example, room 412 was Fire Zone 0412-U1, 0412-U2, 413 was Fire Zone 0413-U1, 0413-U2, etc.

Suppression effects are provided in more detail in calculation SM-C051326701-011, Fire Suppression Effects Analysis. A summary is provided for each fire area in this Appendix.

The Monitoring Program required FP systems and features are listed for each fire area in this Appendix, however a complete description of the Monitoring Program scope, screening, qualitative monitoring and risk target values is described in calculations SM-C051326701-014 through SM-C051326701-017.

Fire hazards for each fire zone are not specifically listed in this appendix. Information regarding fire hazards are found in the following documents.

- F-RIE-FIREPRA-U00-001, Plant Partitioning and Fire Ignition Frequency for Farley Fire PRA (fixed ignition sources)
- FNP-0-FPP-2.0, Protected Area Pre-Fire Plans
- FNP-0-FPP-3.0, Owner Controlled Area Pre-Fire Plan
- FNP-0-FPP-4.0, Radioactive Release Plan
- FNP-1-FPP-1.0, Unit 1 Auxiliary Building Pre-Fire Plan
- FNP-1-FPP-2.0, Unit 1 Turbine Building Pre-Fire Plan
- FNP-1-FPP-3.0, Unit 1 Containment Pre-Fire Plan
- FNP-2-FPP-1.0, Unit 2 Auxiliary Building Pre-Fire Plan
- FNP-2-FPP-2.0, Unit 2 Turbine Building Pre-Fire Plan
- FNP-2-FPP-3.0, Unit 2 Containment Pre-Fire Plan
- A-177678, Combustible Load Calculations for Fire Area Hazards Analysis

3545 pages attached

# Fire Safety Analysis Data Manager (FSA 4.3)

## Fire Safety Analysis

Report ID: Report\_0019\_8145  
Product ID: FSA 4.3  
Revision: 043.00.000  
Build Number: 4.3.6492.20066

Data Revision Number: 20120913164234630 (119637)

Engineering Evaluations  
Show Requires NRC Approval Both  
Show Adequate for the Hazard Both  
Show Functionally Equivalent Both  
Show Inactive Both

Licensing Actions  
Show Required Post-Transition Yes  
Show Not Required Post-Transition Yes

Fire areas: All

Show report section(s): Engineering Evaluations, Fire Area Definition, Previously Approved Engineering Evaluations, Performance Goals, Required FP Systems/Features, Suppression Effect,  
Fire Protection System(s): Detection System, ERFBS, Fire Barrier, Fire Damper, FireDoor, Extinguisher, Gaseous Suppression, Hose Station, Hydrant, Passive Feature, Water Suppression,

Required For Compliance Both  
Required For Insurance Both  
Required For Other Both  
Required For Ch3 Both  
In Scope Of Monitoring Both  
High Safety Significance Both

Report requested by: edan-net\thardy  
Requested from workstation: EDAN-TS1

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0401-U1	401 Control Room	
0412-U1	412 Kitchen	
0413-U1	413 Kitchen store	
0414-U1	414 Toilet	
0416-U1	416 Unit 1 Instrument Rack Area	
0471-U1	471 Unit 2 Instrument Rack Area	
0472-U1	472 Control Room Supply	
0474-U1	474 Office	
0476-U1	476 Offices	
2453-U1	2453 Technical Support Center	
2454-U1	2454 Technical Support Center	
2455-U1	2455 Technical Support Center	

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0401-U1 - 401 Control Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A1	Aux. Bldg-155'-Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A23	Aux. Bldg-155'-Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-117-1	U0-44 Detection System 1A-117-1 Room 412	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-117-2	U0-44 Detection System 1A-117-2 Room 413	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-117-3	U0-44 Detection System 1A-117-3 Room 472	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-54-1	U0-44 Detection System 1A-54-1 Room 401	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-54-2	U0-44 Detection System 1A-54-2 Room 416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-54-3	U0-44 Detection System 1A-54-3 Room 471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
Q1H11NGB2504J-1	U0-44 Incipient Detection System Q1H11NGB2504J-1, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGB2504M-1	U0-44 Incipient Detection System Q1H11NGB2504M, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506G-1	U0-44 Incipient Detection System Q1H11NGSSP2506G, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506H-1	U0-44 Incipient Detection System Q1H11NGSSP2506H, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506I-1	U0-44 Incipient Detection System Q1H11NGSSP2506I, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506J-1	U0-44 Incipient Detection System Q1H11NGSSP2506J, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506K-1	U0-44 Incipient Detection System Q1H11NGSSP2506K, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b> 044-U1 - Control Room Complex & TSC							<b>Systems and Features</b>		
<b>Fire Zone ID:</b> 0401-U1 - 401 Control Room									
<b>System/Feature ID</b>		<b>Description</b>		<b>Ch.3</b>	<b>Ch.4</b>	<b>Reason(s)</b>		<b>Monitoring</b>	<b>HSS</b>
Q1H11NGSSP2506L-1		U0-44 Incipient Detection System Q1H11NGSSP2506L, Room 0416		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	-
Q1H11NGSSP2506M-1		U0-44 Incipient Detection System Q1H11NGSSP2506M-1, Room 0416		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	-
Q1H11NGSSP2506N-1		U0-44 Incipient Detection System Q1H11NGSSP2506N, Room 0416		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	-
Q2H11NGB2504L-1		U0-44 Incipient Detection System Q2H11NGB2504L, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	-
Q2H11NGB2504M-1		U0-44 Incipient Detection System Q2H11NGB2504M, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	-
Q2H11NGB2504N-1		U0-44 Incipient Detection System Q2H11NGB2504N, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	-
Q2H11NGSSP2506G-1		U0-44 Incipient Detection System Q2H11NGSSP2506G, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes
Q2H11NGSSP2506H-1		U0-44 Incipient Detection System Q2H11NGSSP2506H, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes
Q2H11NGSSP2506I-1		U0-44 Incipient Detection System Q2H11NGSSP2506I, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes
Q2H11NGSSP2506K-1		U0-44 Incipient Detection System Q2H11NGSSP2506K, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes
Q2H11NGSSP2506L-1		U0-44 Incipient Detection System Q2H11NGSSP2506L, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes
Q2H11NGSSP2506M-1		U0-44 Incipient Detection System Q2H11NGSSP2506M-1, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes
Q2H11NGSSP2506N-1		U0-44 Incipient Detection System Q2H11NGSSP2506N, Room 0471		-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.		Yes	Yes



## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Fire Zone ID:** 0401-U1 - 401 Control Room

**Systems and Features**

### Active Fire Protection - Suppression

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-Ceiling-471/2501-U0-44/U2-51-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-412/471-U0-44/U0-44-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-471/2429-U0-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-472/471-U0-44/U0-44-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-472/2452-U1-44/U2-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2452/471-U2-43/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/472-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2454/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-2402/471-U2-4/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-318/401-40/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/416-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/476-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-401/501-44/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-466/416-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-417/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-466/474-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-416/415-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-402/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-417/416-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-476/466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/471-S02/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2318/471-U2-42/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/412-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/413-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/414-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/472-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/471-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-412/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-413/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-414/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0401-U1 - 401 Control Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-472/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2319/474-42/44-155: 1-139 -118-20	0:00, F. of 401	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2319/474-42/44-155: 1-139 -118-21	0:00, F. of 401	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-01-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-05-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-02-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-04-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-03-1	0:00, C. of 472	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-412/471-U0-44/U0-44-155 450	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-412/471-U0-44/U0-44-155 452	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/472-U2-44/U1-44-155 453	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-416/415-4/44-155 418	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-474/2466-44/13-155 490	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U1 - Control Room Complex & TSC  
Fire Zone ID: 0412-U1 - 412 Kitchen

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U1 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0413-U1 - 413 Kitchen store	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U1 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0414-U1 - 414 Toilet	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U1 - Control Room Complex & TSC  
Fire Zone ID: 0416-U1 - 416 Unit 1 Instrument Rack Area

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U1 - Control Room Complex & TSC  
Fire Zone ID: 0471-U1 - 471 Unit 2 Instrument Rack Area

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U1 - Control Room Complex & TSC  
Fire Zone ID: 0472-U1 - 472 Control Room Supply

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	044-U1 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0474-U1 - 474 Office	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U1 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0476-U1 - 476 Offices	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2453-U1 - 2453 Technical Support Center	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A49	Aux.Bldg.-155'-Planning Coordination Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A50	Aux.Bldg.-155'-Planning Coordination Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A51	Aux.Bldg.-155'-Planning Coordination Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-2	U0-44 Detection System 2A-51-2 Room 2453	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2453/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/472-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2454/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2116/2454-8/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2117/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2246/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2453-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2454-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2455-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2339/2453-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2339/2453 and fire areas 42/44	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2454-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Fire Zone ID:** 2453-U1 - 2453 Technical Support Center

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-01-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-02-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-03-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-04-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-05-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-06-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-07-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-08-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-09-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-10-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-11-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-07-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-09-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Fire Zone ID:** 2453-U1 - 2453 Technical Support Center

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2453/472-U2-44/U1-44-155 453	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155 2481	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155 2480	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Fire Zone ID:** 2454-U1 - 2454 Technical Support Center

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-200-1	U0-44 Detection System 2A-200-1 Room 2454	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-51-3	U0-44 Detection System 2A-51-3 Room 2454	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Fire Zone ID:** 2455-U1 - 2455 Technical Support Center

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-200-3	U0-44 Detection System 2A-200-3 Room 2455	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-51-4	U0-44 Detection System 2A-51-4 Room 2455	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2339/2455-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	RCS inventory is controlled using Train B charging pump, swing charging pump via Train B power aligned to the RWST.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump, swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated by the depowered RHR isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump, swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring the Loop 1 and Loop 2 RCPs are shut off and charging is controlled. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using TDAFW pump supplying Steam Generator 1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	Essential processes are monitored by dedicated instruments at the hot shutdown panel.	
7.1 Vital Auxiliaries – Electrical	<ol style="list-style-type: none"> <li>1. Electrical power is supplied by diesel generator EDG-1B.</li> <li>2. 4.16 kV and 600 V power is supplied by Train B distribution equipment.</li> <li>3. 125 VDC power and 120 VAC power is supplied by Train B equipment.</li> </ol>	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	



## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.4 Vital Auxiliaries – HVAC	Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. The main control room area does not have any automatic suppression. The TSC area adjacent to the main control room has an automatic sprinkler system, but is separated from the main control room by barriers. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A	Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and to plumb air from emergency air compressor header to AFW flow control valve.</p> <p>-- Risk: Modification to install incipient detection, provide fuse or other elec. iso. device at the DC shunt conn. pt., replace trip device in pnl Q1R42B0001A, bkrs LA08 and LA13; pnl Q1R42B0001B, bkr LB02.</p> <p>Procedures/Recovery Actions:</p> <p>-- DID: Improvements to procedures necessary to incorporate recovery actions required to meet DID criteria.</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0401-U1	401 Control Room	—	E, R, S, N	—	<p>Detection System, 1A-117-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-117-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-117-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-54-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-54-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-54-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, Q1H11NGB2504J-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H11NGB2504M-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H11NGSSP2506G-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Detection System, Q1H11NGSSP2506H-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506I-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506J-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506K-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506N-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGB2504L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGB2504M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGB2504N-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506G-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506H-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506I-1:

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506K-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506N-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-Ceiling-471/2501-U0-44/U2-51-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-412/471-U0-44/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-471/2429-U0-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-472/471-U0-44/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-472/2452-U1-44/U2-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2452/471-U2-43/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2453/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2453/472-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2454/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-2402/471-U2-4/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-318/401-40/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/416-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/476-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-401/501-44/51-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 044-U1 - Control Room Complex & TSC  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-466/416-13/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-417/401-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-466/474-13/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-416/415-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-402/401-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-417/416-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-476/466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/471-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2318/471-U2-42/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/412-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/413-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/414-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/472-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-474/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2215/471-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-412/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-413/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-414/2466-44/13-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-472/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-474/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation.
0412-U1	412 Kitchen	—	—	—	—
0413-U1	413 Kitchen store	—	—	—	—
0414-U1	414 Toilet	—	—	—	—
0416-U1	416 Unit 1 Instrument Rack Area	—	—	—	—
0471-U1	471 Unit 2 Instrument Rack Area	—	—	—	—
0472-U1	472 Control Room Supply	—	—	—	—
0474-U1	474 Office	—	—	—	—
0476-U1	476 Offices	—	—	—	—
2453-U1	2453 Technical Support Center	—	E, R, N	—	Detection System, 2A-51-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2453/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2453/472-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2454/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2116/2454-8/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2117/2454-9/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2246/2454-9/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2335/2453-41/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2335/2454-41/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2335/2455-41/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2339/2453-42/44-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2452/2454-43/44-155:



## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U1 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2452/2453-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/2453-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation.
2454-U1	2454 Technical Support Center	—	E, R, N	—	Detection System, 2A-200-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-51-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria.
2455-U1	2455 Technical Support Center	—	E, R, N	—	Detection System, 2A-200-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-51-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-CEILING-2339/2455-42/44-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0401-U2	401 Control Room	
0412-U2	412 Kitchen	
0413-U2	413 Kitchen store	
0414-U2	414 Toilet	
0416-U2	416 Unit 1 Instrument Rack Area	
0471-U2	471 Unit 2 Instrument Rack Area	
0472-U2	472 Control Room Supply	
0474-U2	474 Office	
0476-U2	476 Offices	
2453-U2	2453 Technical Support Center	
2454-U2	2454 Technical Support Center	
2455-U2	2455 Technical Support Center	

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0401-U2 - 401 Control Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A1	Aux. Bldg-155'-Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-117-1	U0-44 Detection System 1A-117-1 Room 412	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-117-2	U0-44 Detection System 1A-117-2 Room 413	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-117-3	U0-44 Detection System 1A-117-3 Room 472	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-54-1	U0-44 Detection System 1A-54-1 Room 401	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-54-2	U0-44 Detection System 1A-54-2 Room 416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-54-3	U0-44 Detection System 1A-54-3 Room 471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
Q1H11NGB2504J-1	U0-44 Incipient Detection System Q1H11NGB2504J-1, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGB2504M-1	U0-44 Incipient Detection System Q1H11NGB2504M, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506G-1	U0-44 Incipient Detection System Q1H11NGSSP2506G, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506H-1	U0-44 Incipient Detection System Q1H11NGSSP2506H, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506I-1	U0-44 Incipient Detection System Q1H11NGSSP2506I, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506J-1	U0-44 Incipient Detection System Q1H11NGSSP2506J, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506K-1	U0-44 Incipient Detection System Q1H11NGSSP2506K, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b> 044-U2 - Control Room Complex & TSC		<b>Systems and Features</b>				
<b>Fire Zone ID:</b> 0401-U2 - 401 Control Room						
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
Q1H11NGSSP2506L-1	U0-44 Incipient Detection System Q1H11NGSSP2506L, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506M-1	U0-44 Incipient Detection System Q1H11NGSSP2506M-1, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H11NGSSP2506N-1	U0-44 Incipient Detection System Q1H11NGSSP2506N, Room 0416	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H11NGB2504L-1	U0-44 Incipient Detection System Q2H11NGB2504L, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H11NGB2504M-1	U0-44 Incipient Detection System Q2H11NGB2504M, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H11NGB2504N-1	U0-44 Incipient Detection System Q2H11NGB2504N, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H11NGSSP2506G-1	U0-44 Incipient Detection System Q2H11NGSSP2506G, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H11NGSSP2506H-1	U0-44 Incipient Detection System Q2H11NGSSP2506H, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H11NGSSP2506I-1	U0-44 Incipient Detection System Q2H11NGSSP2506I, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H11NGSSP2506K-1	U0-44 Incipient Detection System Q2H11NGSSP2506K, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H11NGSSP2506L-1	U0-44 Incipient Detection System Q2H11NGSSP2506L, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H11NGSSP2506M-1	U0-44 Incipient Detection System Q2H11NGSSP2506M-1, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H11NGSSP2506N-1	U0-44 Incipient Detection System Q2H11NGSSP2506N, Room 0471	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Fire Zone ID:** 0401-U2 - 401 Control Room

**Systems and Features**

### Active Fire Protection - Suppression

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-Ceiling-471/2501-U0-44/U2-51-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-412/471-U0-44/U0-44-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-471/2429-U0-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-472/471-U0-44/U0-44-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-472/2452-U1-44/U2-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2452/471-U2-43/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/472-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2454/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-2402/471-U2-4/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-318/401-40/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/416-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/476-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-401/501-44/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-466/416-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-417/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-466/474-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-416/415-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-402/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-417/416-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-476/466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/471-S02/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2318/471-U2-42/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/412-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/413-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/414-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/472-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/471-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-412/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-413/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-414/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0401-U2 - 401 Control Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-472/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2319/474-42/44-155: 1-139 -118-20	0:00, F. of 401	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2319/474-42/44-155: 1-139 -118-21	0:00, F. of 401	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-01-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-05-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-02-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-04-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-03-1	0:00, C. of 472	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-412/471-U0-44/U0-44-155 450	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-412/471-U0-44/U0-44-155 452	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/472-U2-44/U1-44-155 453	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-416/415-4/44-155 418	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-474/2466-44/13-155 490	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U2 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0412-U2 - 412 Kitchen	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U2 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0413-U2 - 413 Kitchen store	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 044-U2 - Control Room Complex & TSC  
Fire Zone ID: 0414-U2 - 414 Toilet

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U2 - Control Room Complex & TSC  
Fire Zone ID: 0416-U2 - 416 Unit 1 Instrument Rack Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U2 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0471-U2 - 471 Unit 2 Instrument Rack Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U2 - Control Room Complex & TSC  
Fire Zone ID: 0472-U2 - 472 Control Room Supply

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U2 - Control Room Complex & TSC  
Fire Zone ID: 0474-U2 - 474 Office

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	044-U2 - Control Room Complex & TSC	Systems and Features
Fire Zone ID:	0476-U2 - 476 Offices	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Fire Zone ID:** 2453-U2 - 2453 Technical Support Center

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A49	Aux.Bldg.-155'-Planning Coordination Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A50	Aux.Bldg.-155'-Planning Coordination Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A51	Aux.Bldg.-155'-Planning Coordination Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D121	Hose Station - N2V43D121-FZ 44 Room 2453	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-2	U0-44 Detection System 2A-51-2 Room 2453	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2453/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2453/472-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2454/471-U2-44/U1-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2116/2454-8/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2117/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2246/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2453-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2454-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2455-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2339/2453-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2339/2453 and fire areas 42/44	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2454-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Fire Zone ID:** 2453-U2 - 2453 Technical Support Center

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-01-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-02-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-03-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-04-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-05-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-06-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-07-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-08-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-09-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-10-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-11-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-07-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-09-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2453-U2 - 2453 Technical Support Center	

<b>System/Feature ID</b>	<b>Description</b>	<b>Ch.3</b>	<b>Ch.4</b>	<b>Reason(s)</b>	<b>Monitoring</b>	<b>HSS</b>
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

<b>System/Feature ID</b>	<b>Description</b>	<b>Ch.3</b>	<b>Ch.4</b>	<b>Reason(s)</b>	<b>Monitoring</b>	<b>HSS</b>
U0-FNP-S-2453/472-U2-44/U1-44-155 453	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155 2481	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155 2480	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 044-U2 - Control Room Complex & TSC  
Fire Zone ID: 2454-U2 - 2454 Technical Support Center

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-200-1	U0-44 Detection System 2A-200-1 Room 2454	-	Yes		Yes	-
2A-51-3	U0-44 Detection System 2A-51-3 Room 2454	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2455-U2 - 2455 Technical Support Center	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-200-3	U0-44 Detection System 2A-200-3 Room 2455	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-51-4	U0-44 Detection System 2A-51-4 Room 2455	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2339/2455-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump / swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump, swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated by the depowered RHR isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump, swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring the Loop 1 and Loop 2 RCPs are shut off and charging is controlled. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using TDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	Essential processes are monitored by dedicated instruments at the hot shutdown panel.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond.	

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. The main control room area does not have any automatic suppression. The TSC area adjacent to the main control room has an automatic sprinkler system, but is separated from the main control room by barriers. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	Modifications: -- DID: Mods to provide fuse or elec. isolation at the DC shunt pt. or confirm that no opposite polarity conductors run to the pwr blk from the SWIS DC sys and plumb air from emerg. air comp. hdr to AFW FCV. -- Risk: Modification to provide fuse or other elec. iso. device at the DC shunt con. pt., install incipient detection and replace trip device in pnl Q2R42B0001A, bkr LA08; pnl Q2R42B0001B, bkr LB02. Procedures/Recovery Actions: -- DID: Improvements to procedures necessary to incorporate recovery actions required to meet DID criteria. -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
0401-U2	401 Control Room	—	E, R, S, N	—	Detection System, 1A-117-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-117-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-117-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-54-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-54-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-54-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, Q1H11NGB2504J-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGB2504M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506G-1: -- EEEE/LA: Required to support an Engineering Evaluation.



## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506H-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506I-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506J-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506K-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H11NGSSP2506N-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGB2504L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGB2504M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGB2504N-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506G-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506H-1:

## Fire Safety Analysis

**Fire Area ID:** 044-U2 - Control Room Complex & TSC  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506K-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506L-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506M-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H11NGSSP2506N-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-Ceiling-471/2501-U0-44/U2-51-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-412/471-U0-44/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-471/2429-U0-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-472/471-U0-44/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-472/2452-U1-44/U2-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2452/471-U2-43/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2453/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2453/472-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2454/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-2402/471-U2-4/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-318/401-40/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/416-42/44-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/476-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-401/501-44/51-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-466/416-13/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-417/401-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-466/474-13/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-416/415-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-402/401-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-417/416-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-476/466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/471-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2318/471-U2-42/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/412-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/413-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/414-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/472-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-474/2466-44/13-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2215/471-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-412/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-413/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-414/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-472/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-474/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation.
0412-U2	412 Kitchen	—	—	—	—
0413-U2	413 Kitchen store	—	—	—	—
0414-U2	414 Toilet	—	—	—	—
0416-U2	416 Unit 1 Instrument Rack Area	—	—	—	—
0471-U2	471 Unit 2 Instrument Rack Area	—	—	—	—
0472-U2	472 Control Room Supply	—	—	—	—
0474-U2	474 Office	—	—	—	—
0476-U2	476 Offices	—	—	—	—
2453-U2	2453 Technical Support Center	—	E, R, N	—	Detection System, 2A-51-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2453/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2453/472-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2454/471-U2-44/U1-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2116/2454-8/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2117/2454-9/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2246/2454-9/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2335/2453-41/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2335/2454-41/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2335/2455-41/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2339/2453-42/44-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	044-U2 - Control Room Complex & TSC	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2452/2454-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2452/2453-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/2453-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation.  2454-U2      2454 Technical Support Center      —      E, R, N      —      Detection System, 2A-51-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria.  2455-U2      2455 Technical Support Center      —      E, R, N      —      Detection System, 2A-200-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-51-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-CEILING-2339/2455-42/44-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 051-U1 - Control Room HVAC Equipment Rooms

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0501-U1	501 Control Room HVAC Equipment Room	
2501-U1	2501 Control Room HVAC Equipment Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U1 - Control Room HVAC Equipment Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0501-U1 - 501 Control Room HVAC Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A22	Aux. Bldg-175'-Control Vent. Equip. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A89	Aux.Bldg.-175'-Control Vent. Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D101	Hose Station - N1V43D101-FZ 51 Room 501	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-110-1	U1-51 Detection System 1A-110-1 Room 501	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2501/501-U2-51/U1-51-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-401/501-44/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-501/317-51/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/203-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/316-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-501/500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE1/202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE1/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 051-U1 - Control Room HVAC Equipment Rooms  
**Fire Zone ID:** 0501-U1 - 501 Control Room HVAC Equipment Room

### Systems and Features

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-CHASE1/202-51/15-121: 1-121-115-11	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/202-51/15-121: 1-121-115-12	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-01	0:00, N. of 317	-	Yes		Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-02	0:00, N. of 317	-	Yes		Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-03	0:00, E. of 317	-	Yes		Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-04	0:00, E. of 317	-	Yes		Yes	Yes
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-06-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-10-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-14-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-15-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-15-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U1 - Control Room HVAC Equipment Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2501-U1 - 2501 Control Room HVAC Equipment Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D101	Hose Station - N2V43D101-FZ 51 Room 2501	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-1	U2-51 Detection System 2A-110-1 Room 2501	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-Ceiling-471/2501-U0-44/U2-51-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2501/501-U2-51/U1-51-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE2/318-U2-12/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2501/2317-51/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2203-51/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2502/2501-43/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 051-U1 - Control Room HVAC Equipment Rooms  
**Fire Zone ID:** 2501-U1 - 2501 Control Room HVAC Equipment Room

### Systems and Features

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-01-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-03-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-05-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-12-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-17-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-19-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-20-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-24-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-26-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-12-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-17-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-19-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-20-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-24-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-26-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121: 2-121-115-23	0:00, S. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121: 2-121-115-24	0:00, S. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-18	0:00, E. of 2319	-	Yes		Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-19	0:00, E. of 2319	-	Yes		Yes	-

Fire Safety Analysis

Fire Area ID:	051-U1 - Control Room HVAC Equipment Rooms	Systems and Features
Fire Zone ID:	2501-U1 - 2501 Control Room HVAC Equipment Room	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2502/2501-43/51-175 2509	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 051-U1 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A / Train B charging pump, swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV/block valve and Train B PORV/block valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump, or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3. 6. SG Level - Steam Generator 1A/1B/1C level is monitored by narrow range Ch 1/CH 2/CH3, wide range.	

## Fire Safety Analysis

**Fire Area ID:** 051-U1 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B or diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U1 - Control Room HVAC Equipment Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U1 - Control Room HVAC Equipment Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U1 - Control Room HVAC Equipment Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-6), Unit 1 and 2 Control Room HVAC Equipment Room Auxiliary Building (Fire Area 051), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• A manual action can be performed to install portable ventilation equipment in the affected battery rooms within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not exceed acceptable limits.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U1 - Control Room HVAC Equipment Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA20.
0501-U1	501 Control Room HVAC Equipment Room	—	E, R, D	—	Detection System, 1A-110-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2501/501-U2-51/U1-51-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-401/501-44/51-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-501/317-51/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE1/203-4/51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE1/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-501/318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE1/202-51/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE1/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-501/318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-501/500-51/13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE1/202-51/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE1/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 051-U1 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2501-U1	2501 Control Room HVAC Equipment Room	—	E, R, D	—	<p>Detection System, 2A-110-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-Ceiling-471/2501-U0-44/U2-51-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2501/501-U2-51/U1-51-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-CHASE2/318-U2-12/U1-40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2501/2317-51/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2501/OUTSIDE-51/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-CHASE2/2203-51/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-CHASE2/2318-12/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2501/2318-51/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2501/OUTSIDE-51/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-CHASE2/2202-51/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-CHASE2/2318-12/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2502/2501-43/51-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2501/2318-51/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2501/2500-51/13-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-CHASE2/2202-51/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-CHASE2/2319-12/42-139:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0501-U2	501 Control Room HVAC Equipment Room	
2501-U2	2501 Control Room HVAC Equipment Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U2 - Control Room HVAC Equipment Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0501-U2 - 501 Control Room HVAC Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A22	Aux. Bldg-175'-Control Vent. Equip. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A89	Aux.Bldg.-175'-Control Vent. Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-110-1	U1-51 Detection System 1A-110-1 Room 501	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2501/501-U2-51/U1-51-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-401/501-44/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-501/317-51/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/203-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/316-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-501/500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE1/202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE1/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms  
**Fire Zone ID:** 0501-U2 - 501 Control Room HVAC Equipment Room

### Systems and Features

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-CHASE1/202-51/15-121: 1-121-115-11	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/202-51/15-121: 1-121-115-12	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-01	0:00, N. of 317	-	Yes		Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-02	0:00, N. of 317	-	Yes		Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-03	0:00, E. of 317	-	Yes		Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-04	0:00, E. of 317	-	Yes		Yes	Yes
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-06-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-10-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-14-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-15-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-15-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U2 - Control Room HVAC Equipment Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2501-U2 - 2501 Control Room HVAC Equipment Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D101	Hose Station - N2V43D101-FZ 51 Room 2501	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-1	U2-51 Detection System 2A-110-1 Room 2501	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-Ceiling-471/2501-U0-44/U2-51-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2501/501-U2-51/U1-51-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE2/318-U2-12/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2501/2317-51/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2203-51/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2502/2501-43/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms  
**Fire Zone ID:** 2501-U2 - 2501 Control Room HVAC Equipment Room

### Systems and Features

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-01-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-03-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-05-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-12-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-17-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-19-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-20-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-24-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-26-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-12-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-17-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-19-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-20-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-24-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-26-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121: 2-121-115-23	0:00, S. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121: 2-121-115-24	0:00, S. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-18	0:00, E. of 2319	-	Yes		Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-19	0:00, E. of 2319	-	Yes		Yes	-

Fire Safety Analysis

Fire Area ID:	051-U2 - Control Room HVAC Equipment Rooms	Systems and Features
Fire Zone ID:	2501-U2 - 2501 Control Room HVAC Equipment Room	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2502/2501-43/51-175 2509	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump (s) or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves, the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U2 - Control Room HVAC Equipment Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U2 - Control Room HVAC Equipment Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	051-U2 - Control Room HVAC Equipment Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-6), Unit 1 and 2 Control Room HVAC Equipment Room Auxiliary Building (Fire Area 051), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• A manual action can be performed to install portable ventilation equipment in the affected battery rooms within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not exceed acceptable limits.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0501-U2	501 Control Room HVAC Equipment Room	—	E, R, D	—	<p>Detection System, 1A-110-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2501/501-U2-51/U1-51-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-401/501-44/51-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-501/317-51/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-501/OUTSIDE-51/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-CHASE1/203-4/51-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-CHASE1/316-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-501/318-51/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-501/OUTSIDE-51/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-CHASE1/202-51/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-CHASE1/317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-501/318-51/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-501/500-51/13-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-CHASE1/202-51/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-CHASE1/317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 051-U2 - Control Room HVAC Equipment Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2501-U2	2501 Control Room HVAC Equipment Room	—	E, R, D	—	<p>Detection System, 2A-110-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-Ceiling-471/2501-U0-44/U2-51-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-CHASE1/CHASE2-U1-51/U2-51-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2501/501-U2-51/U1-51-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-CHASE1/CHASE2-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-CHASE2/318-U2-12/U1-40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2501/2317-51/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2501/OUTSIDE-51/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-CHASE2/2203-51/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-CHASE2/2318-12/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2501/2318-51/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2501/OUTSIDE-51/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-CHASE2/2202-51/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-CHASE2/2318-12/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2502/2501-43/51-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2501/2318-51/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2501/2500-51/13-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-CHASE2/2202-51/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-CHASE2/2319-12/42-139:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 056A-U1 - DG Building Switchgear Room Train A

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-56A-U1	DG Building Switchgear Room Train A	



## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U1 - DG Building Switchgear Room Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56A-U1 - DG Building Switchgear Room Train A	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43D130	Hose Station - N1Y43D130-FZ 56A Room DG	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-115-1	DG-56A Detection System 1D-115-1 DIESEL ROOM 56A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
1D-80-1	DG-56A Detection System 1D-80-1 DIESEL ROOM 56A	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2D-80-1	DG-56A Detection System 2D-80-1 DIESEL ROOM 56A	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-80-1	Local CO2 system in Fire Area 56A , room number DGB, 4160V Swgr Bus 1H	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1D-80-2	Local CO2 system in Fire Area 56A , room number DGB, 600V Load Center 1-2R	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2D-80-1	Local CO2 system in Fire Area 56A , room number DGB, 4160V Swgr Bus 2H	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U1 - DG Building Switchgear Room Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56A-U1 - DG Building Switchgear Room Train A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-60/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-61/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGFOST-A/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGFOST-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGVB-A/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGVB-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-60/56A-155 D716	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-61/56A-155 D715	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155 D734	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1 D731-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2 D731-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-056A-U1, 056A-U2-DGB-56A-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-056A-U1, 056A-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 056A-U1 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump and swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump and swing charging pump aligned to Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump, swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW supplying Steam Generator 1A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level CH 3. 4. RCS Temperature - RCS Loop 1 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure instrumentation in control room. 6. SG Level - Steam Generator 1A/1B/1C level is monitored by SG level instrumentation in control room.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 056A-U1 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U1 - DG Building Switchgear Room Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U1 - DG Building Switchgear Room Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 056A-U1 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	056A-U1 - DG Building Switchgear Room Train A NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• A long term manual action to shift service water discharge from the circ water canal to recirculate to the service water pond can be performed by manually repositioning valves QIP16V538 and QIP16V545.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U1 - DG Building Switchgear Room Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
DGB-56A-U1	DG Building Switchgear Room Train A	E, R, D	E, R, D, S, N	E, R, B	<p>Detection System, 1D-115-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1D-80-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2D-80-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-60/56A-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-61/56A-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-56A/56B-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-B/56A-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 056A-U1 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-NA/DGB-DU-DGFOST-A/56A-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-NA/DGB-DU-DGFOST-B/56A-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-NA/DGB-DU-DGV B-A/56A-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-NA/DGB-DU-DGV B-B/56A-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-80-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-1D-80-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-2D-80-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Procedures/Recovery Actions, U0-056A-U1, 056A-U2-DGB-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-056A-U1, 056A-U2-DGB-56A-Restricted  transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 056A-U2 - DG Building Switchgear Room Train A

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-56A-U2	DG Building Switchgear Room Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U2 - DG Building Switchgear Room Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56A-U2 - DG Building Switchgear Room Train A	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43D130	Hose Station - N1Y43D130-FZ 56A Room DG	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-115-1	DG-56A Detection System 1D-115-1 DIESEL ROOM 56A	-	Yes		Yes	-
1D-80-1	DG-56A Detection System 1D-80-1 DIESEL ROOM 56A	-	Yes		Yes	-
2D-80-1	DG-56A Detection System 2D-80-1 DIESEL ROOM 56A	-	Yes		Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-80-1	Local CO2 system in Fire Area 56A , room number DGB, 4160V Swgr Bus 1H	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria.	Yes	-
GS-1D-80-2	Local CO2 system in Fire Area 56A , room number DGB, 600V Load Center 1-2R	-	Yes	-- D: Required to meet DID criteria. -- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria.	Yes	-
GS-2D-80-1	Local CO2 system in Fire Area 56A , room number DGB, 4160V Swgr Bus 2H	-	Yes	-- D: Required to meet DID criteria. -- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-60/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-61/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGFOST-A/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U2 - DG Building Switchgear Room Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56A-U2 - DG Building Switchgear Room Train A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-NA/DGB-DU-DGFOST-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGVB-A/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGVB-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-60/56A-155 D716	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-61/56A-155 D715	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155 D734	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1 D731-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2 D731-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-056A-U1, 056A-U2-DGB-56A-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-056A-U1, 056A-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 056A-U2 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach, Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 056A-U2 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1.Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2.4.16 kV and 600 V power is supplied by Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U2 - DG Building Switchgear Room Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U2 - DG Building Switchgear Room Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 056A-U2 - DG Building Switchgear Room Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	056A-U2 - DG Building Switchgear Room Train A NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• A long term manual action to shift service water discharge from the circ water canal to recirculate to the service water pond can be performed by manually repositioning valves QIP16V538 and QIP16V545.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U2 - DG Building Switchgear Room Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q2R42B0001A, breaker LA13. Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
DGB-56A-U2	DG Building Switchgear Room Train A	E, R, D	—	E, R, B	FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-60/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-61/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-56A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-B/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGFOST-A/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGFOST-B/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGVB-A/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGVB-B/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-80-1: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	056A-U2 - DG Building Switchgear Room Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-1D-80-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-2D-80-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Procedures/Recovery Actions, U0-056A-U1, 056A-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-056A-U1, 056A-U2-DGB-56A-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-56B-U1	DG Building Switchgear Room Train B	
DGB-FOY-U1	DG Building Foyer	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U1 - DG Building Switchgear Room Train B & Foyer	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56B-U1 - DG Building Switchgear Room Train B	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43D129	Hose Station - N1Y43D129-FZ 56C Room DG	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-115-1	DG-56A Detection System 1D-115-1 DIESEL ROOM 56A	-	Yes		Yes	-
1D-115-2	DG-56B Detection System 1D-115-2 DIESEL ROOM 56B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1D-80-1	DG-56A Detection System 1D-80-1 DIESEL ROOM 56A	-	Yes		Yes	-
1D-81-1	DG-56B Detection System 1D-81-1 DIESEL ROOM FOY	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2D-80-1	DG-56A Detection System 2D-80-1 DIESEL ROOM 56A	-	Yes		Yes	-
2D-81-1	DG-56B Detection System 2D-81-1 DIESEL ROOM FOY	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-81-1	Local CO2 system in Fire Area 56B , room number DGB, 600V Load Center 1-2S	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1D-81-2	Local CO2 system in Fire Area 56B , room number DGB, 4160V Swgr Bus 1J	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-2D-81-1	Local CO2 system in Fire Area 56B , room number DGB, 4160V Swgr Bus 2J	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer  
**Fire Zone ID:** DGB-56B-U1 - DG Building Switchgear Room Train B

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155	3:00, ,	-	Yes		Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-58/56B-155 D718	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155 D719	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1 D732-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2 D732-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1 D733-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2 D733-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer  
**Fire Zone ID:** DGB-FOY-U1 - DG Building Foyer

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG14	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG3	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-115-2	DG-56B Detection System 1D-115-2 DIESEL ROOM 56B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1D-115-3	DG-56C Detection System 1D-115-3 DIESEL ROOM FOY	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-57/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-56B/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-B/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-B/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer  
**Fire Zone ID:** DGB-FOY-U1 - DG Building Foyer

### Systems and Features

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-56B/59-155 D717	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155 D734	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-056B-U1, 056B-U2-DGB-56B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-056B-U1, 056B-U2-DGB-AREA WIDE-Modifications	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-056B-U1, 056B-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room or Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Plant shutdown is performed from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump and swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump and swing charging pump aligned to Train A aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump and swing charging pump aligned to Train A, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW supplying Steam Generator 1A/1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by Control Room PZR instrumentation and Control Room RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by Control Room instrumentation. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by Control Room Instrumentation. 6. SG Level - Steam Generator 1A/1B/1C level is monitored by Control Room instrumentation.	

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U1 - DG Building Switchgear Room Train B & Foyer	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U1 - DG Building Switchgear Room Train B & Foyer	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	056B-U1 - DG Building Switchgear Room Train B & Foyer NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• A long term manual action to shift service water discharge from the circ water canal to recirculate to the service water pond can be performed by manually repositioning valve Q1P16V539.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U1 - DG Building Switchgear Room Train B & Foyer	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
DGB-56B-U1	DG Building Switchgear Room Train B	E, R, D	E, R, D, S, N	—	Detection System, 1D-115-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1D-81-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2D-81-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-81-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U1 - DG Building Switchgear Room Train B & Foyer	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-FOY-U1	DG Building Foyer	—	E, R, D, S, N	E, R, B	-- Risk: Required to meet risk criteria. Gaseous Suppression, GS-1D-81-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-2D-81-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Detection System, 1D-115-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1D-115-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-57/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-56B/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-56A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-B/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-B/56B-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U0-056B-U1, 056B-U2-DGB-AREA WIDE-

## Fire Safety Analysis

**Fire Area ID:** 056B-U1 - DG Building Switchgear Room Train B & Foyer

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Required Systems and Features**

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Modifications: -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U0-056B-U1, 056B-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-056B-U1, 056B-U2-DGB-56B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 056B-U2 - DG Building Switchgear Room Train B & Foyer

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-56B-U2	DG Building Switchgear Room Train B	
DGB-FOY-U2	DG Building Foyer	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56B-U2 - DG Building Switchgear Room Train B	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43D129	Hose Station - N1Y43D129-FZ 56C Room DG	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-115-1	DG-56A Detection System 1D-115-1 DIESEL ROOM 56A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1D-115-2	DG-56B Detection System 1D-115-2 DIESEL ROOM 56B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1D-80-1	DG-56A Detection System 1D-80-1 DIESEL ROOM 56A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1D-81-1	DG-56B Detection System 1D-81-1 DIESEL ROOM FOY	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2D-80-1	DG-56A Detection System 2D-80-1 DIESEL ROOM 56A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2D-81-1	DG-56B Detection System 2D-81-1 DIESEL ROOM FOY	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-56B-U2 - DG Building Switchgear Room Train B	

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-81-1	Local CO2 system in Fire Area 56B , room number DGB, 600V Load Center 1-2S	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1D-81-2	Local CO2 system in Fire Area 56B , room number DGB, 4160V Swgr Bus 1J	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-2D-81-1	Local CO2 system in Fire Area 56B , room number DGB, 4160V Swgr Bus 2J	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155	3:00, ,	-	Yes		Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-58/56B-155 D718	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155 D719	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1 D732-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2 D732-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1 D733-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2 D733-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	056B-U2 - DG Building Switchgear Room Train B & Foyer	Systems and Features
Fire Zone ID:	DGB-56B-U2 - DG Building Switchgear Room Train B	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 056B-U2 - DG Building Switchgear Room Train B & Foyer  
**Fire Zone ID:** DGB-FOY-U2 - DG Building Foyer

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-115-2	DG-56B Detection System 1D-115-2 DIESEL ROOM 56B	-	Yes		Yes	-
1D-115-3	DG-56C Detection System 1D-115-3 DIESEL ROOM FOY	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-57/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-56B/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-B/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-B/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-FOY-U2 - DG Building Foyer	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-56B/59-155 D717	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/DGB-56A/56B-155 D734	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-056B-U1, 056B-U2-DGB-56B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-056B-U1, 056B-U2-DGB-AREA WIDE-Modifications	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-056B-U1, 056B-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 056B-U2 - DG Building Switchgear Room Train B & Foyer  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 056B-U2 - DG Building Switchgear Room Train B & Foyer  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A	Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 056B-U2 - DG Building Switchgear Room Train B & Foyer  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	056B-U2 - DG Building Switchgear Room Train B & Foyer NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• A long term manual action to shift service water discharge from the circ water canal to recirculate to the service water pond can be performed by manually repositioning valve Q1P16V539.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q2R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
DGB-56B-U2	DG Building Switchgear Room Train B	E, R, D	E, R, D, S, N	—	<p>Detection System, 1D-115-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1D-115-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1D-80-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1D-81-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2D-80-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2D-81-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-81-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-1D-81-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-2D-81-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet risk criteria. Detection System, 1D-115-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-57/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation.
DGB-FOY-U2	DG Building Foyer	—	E, R, D, S, N	E, R, B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	056B-U2 - DG Building Switchgear Room Train B & Foyer	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-56B/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-56A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-B/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-B/56B-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U0-056B-U1, 056B-U2-DGB-AREA WIDE- Modifications: -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U0-056B-U1, 056B-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-056B-U1, 056B-U2-DGB-56B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 057-U1 - Diesel Generator Room 2C

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-2C-U1	Diesel Generator Room 2C	

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U1 - Diesel Generator Room 2C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2C-U1 - Diesel Generator Room 2C	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG2	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG8	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-5	DG-57 Detection System 1D-78-5 DIESEL ROOM 2C	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-1	CO2 Flooding System system in Fire Area 57 , room number DGB, DG 2C	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-57/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-57/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-62/57-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-57/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-62/57-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: 1-155-336-03-1	0:00, C. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: 1-155-336-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-57/71-155: 1-155-336-01	0:00, S. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U1 - Diesel Generator Room 2C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2C-U1 - Diesel Generator Room 2C	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-57/71-155 D713	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-57/71-155 D714	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-057-U1, 057-U2-DGB-2C-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-057-U1, 057-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 057-U1 - Diesel Generator Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump and swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve or a letdown path containment isolation valve. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump and swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV, aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored in the Control Room. 6. SG Level - Steam Generator 1A/1B/1C level is monitored in the Control Room.	

## Fire Safety Analysis

**Fire Area ID:** 057-U1 - Diesel Generator Room 2C

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond OR Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U1 - Diesel Generator Room 2C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U1 - Diesel Generator Room 2C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 057-U1 - Diesel Generator Room 2C Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U1 - Diesel Generator Room 2C	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
DGB-2C-U1	Diesel Generator Room 2C	E, D	E, R, D, S, N	E, R, B	Detection System, 1D-78-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-57/58-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-57/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-62/57-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-57/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-62/57-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-78-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-057-U1, 057-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-057-U1, 057-U2-DGB-2C-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 057-U2 - Diesel Generator Room 2C

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-2C-U2	Diesel Generator Room 2C	

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U2 - Diesel Generator Room 2C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2C-U2 - Diesel Generator Room 2C	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-5	DG-57 Detection System 1D-78-5 DIESEL ROOM 2C	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-1	CO2 Flooding System system in Fire Area 57 , room number DGB, DG 2C	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-57/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-57/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-62/57-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-57/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-62/57-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: 1-155-336-03-1	0:00, C. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: 1-155-336-03-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-57/71-155: 1-155-336-01	0:00, S. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U2 - Diesel Generator Room 2C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2C-U2 - Diesel Generator Room 2C	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-57/71-155 D713	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-57/71-155 D714	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-057-U1, 057-U2-DGB-2C-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-057-U1, 057-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 057-U2 - Diesel Generator Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using an excess one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 057-U2 - Diesel Generator Room 2C

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U2 - Diesel Generator Room 2C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U2 - Diesel Generator Room 2C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	057-U2 - Diesel Generator Room 2C NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	057-U2 - Diesel Generator Room 2C	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to improve heat detection system to ensure adequate coordination between HVAC system and CO2 system.
DGB-2C-U2	Diesel Generator Room 2C	E, D	E, R, D, S, N	E, R, B	Detection System, 1D-78-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-57/58-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-57/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-62/57-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-57/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-62/57-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-78-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-057-U1, 057-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-057-U1, 057-U2-DGB-2C-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 058-U1 - Diesel Generator Room 1B

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-1B-U1	Diesel Generator Room 1B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U1 - Diesel Generator Room 1B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1B-U1 - Diesel Generator Room 1B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG15	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG6	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-2	DG-58 Detection System 1D-78-2 DIESEL ROOM 1B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-2	CO2 Flooding System system in Fire Area 58 , room number DGB, DG 1B	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-57/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-58/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-62/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-63/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-63/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: 1-155-336-04-1	0:00, C. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: 1-155-336-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-58/71-155: 1-155-336-06	0:00, S. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U1 - Diesel Generator Room 1B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1B-U1 - Diesel Generator Room 1B	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-58/56B-155 D718	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155 D719	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155 D710	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155 D711	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-058-U1, 058-U2-DGB-1B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-058-U1, 058-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 058-U1 - Diesel Generator Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump charging pump and swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump and swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves and the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV and aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3.4.RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3.6.SG Level - Steam Generator 1A/1B/1C level is monitored in the Control Room.	



## Fire Safety Analysis

**Fire Area ID:** 058-U1 - Diesel Generator Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U1 - Diesel Generator Room 1B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U1 - Diesel Generator Room 1B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	058-U1 - Diesel Generator Room 1B NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U1 - Diesel Generator Room 1B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace required mechanical equipment in CO2 suppression system and to improve heat detection system to ensure adequate coordination between HVAC system and CO2 system.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
DGB-1B-U1	Diesel Generator Room 1B	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 1D-78-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-57/58-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-58/59-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-62/58-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-58/56B-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-63/58-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-58/71-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-63/58-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-78-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>Procedures/Recovery Actions, U0-058-U1, 058-U2-DGB-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-058-U1, 058-U2-DGB-1B-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 058-U2 - Diesel Generator Room 1B

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-1B-U2	Diesel Generator Room 1B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U2 - Diesel Generator Room 1B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1B-U2 - Diesel Generator Room 1B	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-2	DG-58 Detection System 1D-78-2 DIESEL ROOM 1B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-2	CO2 Flooding System system in Fire Area 58 , room number DGB, DG 1B	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-57/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-58/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-62/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-63/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-63/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: 1-155-336-04-1	0:00, C. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: 1-155-336-04-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-58/71-155: 1-155-336-06	0:00, S. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U2 - Diesel Generator Room 1B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1B-U2 - Diesel Generator Room 1B	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-58/56B-155 D718	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-58/56B-155 D719	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155 D710	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155 D711	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-058-U1, 058-U2-DGB-1B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-058-U1, 058-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 058-U2 - Diesel Generator Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 058-U2 - Diesel Generator Room 1B

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U2 - Diesel Generator Room 1B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U2 - Diesel Generator Room 1B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	058-U2 - Diesel Generator Room 1B NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	058-U2 - Diesel Generator Room 1B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
DGB-1B-U2	Diesel Generator Room 1B	E, D	E, R, D, S, N	E, R, B	Detection System, 1D-78-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-57/58-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-58/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-62/58-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-58/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-63/58-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-58/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-63/58-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-78-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-058-U1, 058-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-058-U1, 058-U2-DGB-1B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 059-U1 - Diesel Generator Room 2B

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-2B-U1	Diesel Generator Room 2B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U1 - Diesel Generator Room 2B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2B-U1 - Diesel Generator Room 2B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-4	DG-59 Detection System 1D-78-4 DIESEL ROOM 2B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-3	CO2 Flooding System system in Fire Area 59 , room number DGB, DG 2B	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-58/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-59/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-63/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-64/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-56B/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-59/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-64/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-59/71-155: 1-155-336-09	0:00, S. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes



## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U1 - Diesel Generator Room 2B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2B-U1 - Diesel Generator Room 2B	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-56B/59-155 D717	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-59/71-155 D707	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-59/71-155 D708	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-059-U1, 059-U2-DGB-2B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-059-U1, 059-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 059-U1 - Diesel Generator Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves and the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV and aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel and RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3.4.RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3.6.SG Level - Steam Generator 1A/1B/1C level is monitored by narrow range Ch 1/CH 2/CH3, wide range non-safety channel.	

## Fire Safety Analysis

**Fire Area ID:** 059-U1 - Diesel Generator Room 2B

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U1 - Diesel Generator Room 2B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U1 - Diesel Generator Room 2B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	059-U1 - Diesel Generator Room 2B NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U1 - Diesel Generator Room 2B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001B, breaker LB07 and improve heat detection system to ensure adequate coordination between HVAC system and CO2 system.</p>
DGB-2B-U1	Diesel Generator Room 2B	E	E, R, D, S, N	E, R, B	<p>Detection System, 1D-78-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-58/59-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-59/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-63/59-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-64/59-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-56B/59-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-59/71-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-64/59-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-78-3:</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>Procedures/Recovery Actions, U0-059-U1, 059-U2-DGB-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-059-U1, 059-U2-DGB-2B-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 059-U2 - Diesel Generator Room 2B

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-2B-U2	Diesel Generator Room 2B	



## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U2 - Diesel Generator Room 2B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2B-U2 - Diesel Generator Room 2B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG11	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG5	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-4	DG-59 Detection System 1D-78-4 DIESEL ROOM 2B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-3	CO2 Flooding System system in Fire Area 59 , room number DGB, DG 2B	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-58/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-59/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-63/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-64/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-56B/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-59/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-64/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-59/71-155: 1-155-336-09	0:00, S. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U2 - Diesel Generator Room 2B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-2B-U2 - Diesel Generator Room 2B	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-56B/59-155 D717	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-59/71-155 D707	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-59/71-155 D708	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-059-U1, 059-U2-DGB-2B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-059-U1, 059-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 059-U2 - Diesel Generator Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 059-U2 - Diesel Generator Room 2B

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U2 - Diesel Generator Room 2B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A	Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U2 - Diesel Generator Room 2B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 059-U2 - Diesel Generator Room 2B Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-2), Unit 1 and 2 Diesel Gen Bldg Foyer/Train B Swgr Rm (Fire Area 056B, 056C)(New Fire Area 056B), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	059-U2 - Diesel Generator Room 2B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
DGB-2B-U2	Diesel Generator Room 2B	E	E, R, D, S, N	E, R, B	Detection System, 1D-78-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-58/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-59/60-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-63/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-64/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-56B/59-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-59/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-64/59-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-78-3: -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-059-U1, 059-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-059-U1, 059-U2-DGB-2B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 060-U1 - Diesel Generator Room 1C

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-1C-U1	Diesel Generator Room 1C	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1C-U1 - Diesel Generator Room 1C	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG10	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG9	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-3	DG-60 Detection System 1D-78-3 DIESEL ROOM 1C	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-4	CO2 Flooding System system in Fire Area 60 , room number DGB, DG 1C	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-59/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-60/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-64/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-60/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-65/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-65/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-60/71-155: 1-155-336-12	0:00, S. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1C-U1 - Diesel Generator Room 1C	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-60/56A-155 D716	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155 D704	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155 D705	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-060-U1, 060-U2-DGB-1C-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-060-U1, 060-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 060-U1 - Diesel Generator Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV and aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3.4.RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3.6.SG Level - Steam Generator 1A/1B/1C level is monitored by narrow range Ch 1/CH 2/CH3, wide range non-safety channel.	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A	Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
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<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li></ul>
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This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
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<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul>
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This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).



## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U1 - Diesel Generator Room 1C	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to improve heat detection system to ensure adequate coordination between HVAC system and CO2 system.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
DGB-1C-U1	Diesel Generator Room 1C	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 1D-78-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-59/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-60/61-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-64/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-60/56A-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-65/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-60/71-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-65/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-78-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>Procedures/Recovery Actions, U0-060-U1, 060-U2-DGB-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-060-U1, 060-U2-DGB-1C-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 060-U2 - Diesel Generator Room 1C

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-1C-U2	Diesel Generator Room 1C	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U2 - Diesel Generator Room 1C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1C-U2 - Diesel Generator Room 1C	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-3	DG-60 Detection System 1D-78-3 DIESEL ROOM 1C	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-4	CO2 Flooding System system in Fire Area 60 , room number DGB, DG 1C	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-59/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/DGB-60/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-64/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-60/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-DGB/DGB-65/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-65/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-60/71-155: 1-155-336-12	0:00, S. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U2 - Diesel Generator Room 1C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1C-U2 - Diesel Generator Room 1C	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-60/56A-155 D716	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155 D704	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155 D705	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-060-U1, 060-U2-DGB-1C-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-060-U1, 060-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 060-U2 - Diesel Generator Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 060-U2 - Diesel Generator Room 1C

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U2 - Diesel Generator Room 1C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A	Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U2 - Diesel Generator Room 1C	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	060-U2 - Diesel Generator Room 1C NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	060-U2 - Diesel Generator Room 1C	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-1C-U2	Diesel Generator Room 1C	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 1D-78-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-59/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-60/61-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-64/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-60/56A-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-65/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-60/71-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-65/60-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-78-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>Procedures/Recovery Actions, U0-060-U1, 060-U2-DGB-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-060-U1, 060-U2-DGB-1C-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 061-U1 - Diesel Generator Room 1-2A

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-1-2A-U1	Diesel Generator Room 1-2A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U1 - Diesel Generator Room 1-2A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1-2A-U1 - Diesel Generator Room 1-2A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG16	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG4	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-1	DG-61 Detection System 1D-78-1 DIESEL ROOM 1-2A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-5	CO2 Flooding System system in Fire Area 61 , room number DGB, DG 1-2A	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-60/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-65/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-61/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-66/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-61/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-66/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-61/71-155: 1-155-336-15	0:00, S. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U1 - Diesel Generator Room 1-2A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1-2A-U1 - Diesel Generator Room 1-2A	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-61/56A-155 D715	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-61/71-155 D702	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-061-U1, 061-U2-DGB-1-2A-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-061-U1, 061-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 061-U1 - Diesel Generator Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range CH 3, PZR non-safety channel and RCS wide range pressure for Loop 1.3.Pressurizer Level - Pressurizer level is monitored by PZR level CH 3.4.RCS Temperature - RCS Loop 1 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored in the Control Room.6.SG Level - Steam Generator 1A/1B/1C level is monitored in the Control Room.	
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by {off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2.4.16 kV and 600 V power is supplied by Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 061-U1 - Diesel Generator Room 1-2A

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U1 - Diesel Generator Room 1-2A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U1 - Diesel Generator Room 1-2A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U1 - Diesel Generator Room 1-2A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Licensing Action**      Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

**Licensing Basis**      Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

**Licensing Action**      Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

**Licensing Basis**      Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U1 - Diesel Generator Room 1-2A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
DGB-1-2A-U1	Diesel Generator Room 1-2A	E, D	E, R, D, S, N	E, R, B	Detection System, 1D-78-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-60/61-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/DGB-65/61-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-61/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/DGB-66/61-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/DGB-61/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/DGB-66/61-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1D-78-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-061-U1, 061-U2-DGB-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-061-U1, 061-U2-DGB-1-2A-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 061-U2 - Diesel Generator Room 1-2A

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
DGB-1-2A-U2	Diesel Generator Room 1-2A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U2 - Diesel Generator Room 1-2A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1-2A-U2 - Diesel Generator Room 1-2A	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-78-1	DG-61 Detection System 1D-78-1 DIESEL ROOM 1-2A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-78-5	CO2 Flooding System system in Fire Area 61 , room number DGB, DG 1-2A	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-60/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-65/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-61/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-66/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-61/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-66/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-61/71-155: 1-155-336-15	0:00, S. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U2 - Diesel Generator Room 1-2A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-1-2A-U2 - Diesel Generator Room 1-2A	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-DGB/DGB-61/56A-155 D715	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-61/71-155 D702	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-061-U1, 061-U2-DGB-1-2A-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-061-U1, 061-U2-DGB-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 061-U2 - Diesel Generator Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach aux spray for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 061-U2 - Diesel Generator Room 1-2A

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled and drainage capacity exceeds the expected fire suppression flow. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U2 - Diesel Generator Room 1-2A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U2 - Diesel Generator Room 1-2A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U2 - Diesel Generator Room 1-2A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-1), Unit 1 and 2 Diesel Generator Building Train A Switchgear Room (Fire Area 056A), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
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<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies separating the switchgear room from the diesel generator rooms, and the configuration of the in-situ combustibles in the diesel generator building Train A switchgear room, provide reasonable assurance that fire would not propagate into the communicating diesel generator rooms.</li></ul>
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This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
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<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p>
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- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	061-U2 - Diesel Generator Room 1-2A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to improve heat detection system to ensure adequate coordination between HVAC system and CO2 system.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
DGB-1-2A-U2	Diesel Generator Room 1-2A	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 1D-78-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-60/61-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-65/61-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-61/56A-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-66/61-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-61/71-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-66/61-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-78-5:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>Procedures/Recovery Actions, U0-061-U1, 061-U2-DGB-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-061-U1, 061-U2-DGB-1-2A-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DGB-DFT-2C	Day Fuel Tank Room 2C	

## Fire Safety Analysis

<b>Fire Area ID:</b>	062 - Day Fuel Tank Room 2C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-2C - Day Fuel Tank Room 2C	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-79-5	DG-62 Detection System 1D-79-5 DIESEL DAY FUEL TANK ROOM 2C	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-79-1	CO2 Flooding Suppression system in Fire Area 62 , room number DGB, DG Day Tank Room 2C	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-62/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-62/57-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-62/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-62/57-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-62/71-155: 1-155-336-02	0:00, S. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-62/71-155 D712	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	062 - Day Fuel Tank Room 2C	Systems and Features
Fire Zone ID:	DGB-DFT-2C - Day Fuel Tank Room 2C	

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-62-NA-DFT-2C-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	



## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 3. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 4. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 062 - Day Fuel Tank Room 2C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-DFT-2C	Day Fuel Tank Room 2C	E	E, R, D	E, B	<p>Detection System, 1D-79-5:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-62/58-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-62/57-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-62/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-62/57-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-79-1:  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Restricted transient controls, U0-62-NA-DFT-2C-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DGB-DFT-1B	Day Fuel Tank Room 1B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	063 - Day Fuel Tank Room 1B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-1B - Day Fuel Tank Room 1B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-79-2	DG-63 Detection System 1D-79-2 DIESEL DAY FUEL TANK ROOM 1B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-79-2	CO2 Flooding Suppression system in Fire Area 63 , room number DGB, DG Day Tank Toom 1B	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-63/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-63/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-63/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-63/58-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-63/71-155: 1-155-336-05	0:00, S. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-63/71-155 D709	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	063 - Day Fuel Tank Room 1B	Systems and Features
Fire Zone ID:	DGB-DFT-1B - Day Fuel Tank Room 1B	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-63-NA-DFT-1B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 063 - Day Fuel Tank Room 1B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-DFT-1B	Day Fuel Tank Room 1B	E	E, R, D	E, B	<p>Detection System, 1D-79-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-63/59-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-63/58-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-63/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-63/58-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-79-2:  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Restricted transient controls, U0-63-NA-DFT-1B-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DGB-DFT-2B	Day Fuel Tank Room 2B	

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Fire Zone ID:** DGB-DFT-2B - Day Fuel Tank Room 2B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-79-4	DG-64 Detection System 1D-79-4 DIESEL DAY FUEL TANK ROOM 2B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-79-3	CO2 Flooding Suppression system in Fire Area 64 , room number DGB, DG Day Tank Room 2B	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-64/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-64/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-64/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-64/59-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1: 1-155-336-08-1	0:00, C. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2: 1-155-336-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-64/71-155: 1-155-336-07	0:00, S. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes



## Fire Safety Analysis

<b>Fire Area ID:</b>	064 - Day Fuel Tank Room 2B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-2B - Day Fuel Tank Room 2B	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-64/71-155 D706	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-64-NA-DFT-2B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 064 - Day Fuel Tank Room 2B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-DFT-2B	Day Fuel Tank Room 2B	E	E, R, D	E, B	<p>Detection System, 1D-79-4:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-64/60-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-64/59-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-64/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-64/59-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-79-3:  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Restricted transient controls, U0-64-NA-DFT-2B-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DGB-DFT-1C	Day Fuel Tank Room 1C	



## Fire Safety Analysis

<b>Fire Area ID:</b>	065 - Day Fuel Tank Room 1C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-1C - Day Fuel Tank Room 1C	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-79-3	DG-65 Detection System 1D-79-3 DIESEL DAY FUEL TANK ROOM 1C	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-79-4	CO2 Flooding Suppression system in Fire Area 65 , room number DGB, DG Day Tank Room 1C	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/DGB-65/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-65/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-65/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-65/60-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1: 1-155-336-11-1	0:00, C. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2: 1-155-336-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-65/71-155: 1-155-336-10	0:00, S. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	065 - Day Fuel Tank Room 1C	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-1C - Day Fuel Tank Room 1C	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-65/71-155 D703	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-65-NA-DFT-1C-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 065 - Day Fuel Tank Room 1C  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-DFT-1C	Day Fuel Tank Room 1C	E	E, R, D	E, B	<p>Detection System, 1D-79-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/DGB-65/61-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-65/60-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-65/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-65/60-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-79-4:  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Restricted transient controls, U0-65-NA-DFT-1C-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DGB-DFT-1-2A	Day Fuel Tank Room 1-2A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	066 - Day Fuel Tank Room 1-2A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-1-2A - Day Fuel Tank Room 1-2A	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-79-1	DG-66 Detection System 1D-79-1 DIESEL DAY FUEL TANK ROOM 1-2A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1D-79-5	CO2 Flooding Suppression system in Fire Area 66 , room number DGB, DG Day Tank Room 1-2A	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-66/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/DGB-66/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-66/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/DGB-66/61-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1: 1-155-336-14-1	0:00, C. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2: 1-155-336-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/DGB-66/71-155: 1-155-336-13	0:00, S. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	066 - Day Fuel Tank Room 1-2A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-DFT-1-2A - Day Fuel Tank Room 1-2A	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-66/71-155 D700	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-66/71-155 D701	0:00,	-	Yes		Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-66-NA-DFT-1-2A-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).



## Fire Safety Analysis

**Fire Area ID:** 066 - Day Fuel Tank Room 1-2A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-DFT-1-2A	Day Fuel Tank Room 1-2A	E	E, R, D	E, B	<p>Detection System, 1D-79-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-66/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-66/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/DGB-66/61-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-66/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-DGB/DGB-66/61-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1D-79-5:  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Restricted transient controls, U0-66-NA-DFT-1-2A-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 067 - RWIS Pump Room B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
RWIS-PR-B	RWIS Pump Room B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	067 - RWIS Pump Room B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	RWIS-PR-B - RWIS Pump Room B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
RW1	RW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1RW-96-2	U0-67 Detection System 1RW-96-2 Room RVR INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-B/67-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-B/67-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-RVR INTK/RVR INTK-67/69-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/RVR INTK-67/68-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	067 - RWIS Pump Room B	Systems and Features
Fire Zone ID:	RWIS-PR-B - RWIS Pump Room B	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-RVR INTK/RVR INTK-67/69-102 D863	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 067 - RWIS Pump Room B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 067 - RWIS Pump Room B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 067 - RWIS Pump Room B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 067 - RWIS Pump Room B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 067 - RWIS Pump Room B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
RWIS-PR-B	RWIS Pump Room B	—	E, R, D	—	<p>Detection System, 1RW-96-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-B/67-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-B/67-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-RVR INTK/RVR INTK-67/69-102:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-RVR INTK/RVR INTK-67/68-102:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 068 - RWIS Pump Room A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
RWIS-PR-A	RWIS Pump Room A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	068 - RWIS Pump Room A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	RWIS-PR-A - RWIS Pump Room A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
RW3	RW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1RW-96-1	U0-68 Detection System 1RW-96-1 Room RVR INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-A/68-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-A/68-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-RVR INTK/RVR INTK-68/70-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/RVR INTK-67/68-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	068 - RWIS Pump Room A	Systems and Features
Fire Zone ID:	RWIS-PR-A - RWIS Pump Room A	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-RVR INTK/RVR INTK-68/70-102 D860	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 068 - RWIS Pump Room A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 068 - RWIS Pump Room A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 068 - RWIS Pump Room A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

## Fire Safety Analysis

**Fire Area ID:** 068 - RWIS Pump Room A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 068 - RWIS Pump Room A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
RWIS-PR-A	RWIS Pump Room A	—	E, R, D	—	<p>Detection System, 1RW-96-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-A/68-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-A/68-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-RVR INTK/RVR INTK-68/70-102:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-RVR INTK/RVR INTK-67/68-102:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 069 - RWIS Switchgear Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
RWIS-SG-B	RWIS Switchgear Room-Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	069 - RWIS Switchgear Room-Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	RWIS-SG-B - RWIS Switchgear Room-Train B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
RW2	RW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1RW-96-4	U0-69 Detection System 1RW-96-4 Room RVR INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1RW-95-2	Local CO2 system in Fire Area 69 , room number RVR INTK, 600V load center 1J-2J	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/RVR INTK-67/69-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/RVR INTK-70/69-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	069 - RWIS Switchgear Room-Train B	Systems and Features
Fire Zone ID:	RWIS-SG-B - RWIS Switchgear Room-Train B	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-RVR INTK/RVR INTK-67/69-102 D863	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 069 - RWIS Switchgear Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 069 - RWIS Switchgear Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 069 - RWIS Switchgear Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 069 - RWIS Switchgear Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 069 - RWIS Switchgear Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
RWIS-SG-B	RWIS Switchgear Room-Train B	—	E, R, D	—	<p>Detection System, 1RW-96-4:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-RVR INTK/RVR INTK-67/69-102:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-RVR INTK/RVR INTK-70/69-102:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	070 - RWIS Switchgear Room-Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
RWIS-SG-A	RWIS Switchgear Room-Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	070 - RWIS Switchgear Room-Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	RWIS-SG-A - RWIS Switchgear Room-Train A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
RW4	RW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1RW-96-3	U0-70 Detection System 1RW-96-3 Room RVR INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1RW-95-1	Local CO2 system in Fire Area 70 , room number RVR INTK, 600V load center 1H-2H	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/RVR INTK-68/70-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/RVR INTK-70/69-102	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	070 - RWIS Switchgear Room-Train A	Systems and Features
Fire Zone ID:	RWIS-SG-A - RWIS Switchgear Room-Train A	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-RVR INTK/RVR INTK-68/70-102 D860	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 070 - RWIS Switchgear Room-Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 070 - RWIS Switchgear Room-Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	070 - RWIS Switchgear Room-Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 070 - RWIS Switchgear Room-Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 070 - RWIS Switchgear Room-Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
RWIS-SG-A	RWIS Switchgear Room-Train A	—	E, R, S	—	Detection System, 1RW-96-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/RVR INTK-68/70-102: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/RVR INTK-70/69-102: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DGB-COR	DG Building Corridor	

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Fire Zone ID:** DGB-COR - DG Building Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
DG1	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG12	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG13	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
DG7	Diesel Gen. Bldg-	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1D-116-1	DG-71 Detection System 1D-116-1 DIESEL BUILDING CORRIDOR	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/DGB-1-DU-DGSWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-NA/DGB-1-DU-DGSWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-NA/DGB-2-DU-DGSWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-N-NA/DGB-2-DU-DGSWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-57/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-59/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-61/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-62/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-63/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-64/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-65/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-66/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	071 - DG Building Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	DGB-COR - DG Building Corridor	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-NA/DGB-1-DU-DGRWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-1-DU-DGRWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-2-DU-DGRWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-2-DU-DGRWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-57/71-155: 1-155-336-01	0:00, S. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155: 1-155-336-06	0:00, S. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-59/71-155: 1-155-336-09	0:00, S. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155: 1-155-336-12	0:00, S. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-61/71-155: 1-155-336-15	0:00, S. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-62/71-155: 1-155-336-02	0:00, S. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-63/71-155: 1-155-336-05	0:00, S. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-64/71-155: 1-155-336-07	0:00, S. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-65/71-155: 1-155-336-10	0:00, S. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-66/71-155: 1-155-336-13	0:00, S. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-DGB/DGB-57/71-155 D713	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-57/71-155 D714	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155 D710	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-58/71-155 D711	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-59/71-155 D707	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-59/71-155 D708	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155 D704	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-60/71-155 D705	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-61/71-155 D702	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-62/71-155 D712	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-63/71-155 D709	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-64/71-155 D706	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-65/71-155 D703	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-66/71-155 D700	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-DGB/DGB-66/71-155 D701	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	071 - DG Building Corridor	Systems and Features
Fire Zone ID:	DGB-COR - DG Building Corridor	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-71-DGB-COR-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance



## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DGB-COR	DG Building Corridor	—	E, R, D	E, B	<p>Detection System, 1D-116-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-71/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-DGB/OUTSIDE-71/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/OUTSIDE-71/YARD-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-DGB/OUTSIDE-71/YARD-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-NA/DGB-1-DU-DGSWIS-A/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-NA/DGB-1-DU-DGSWIS-B/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-NA/DGB-2-DU-DGSWIS-A/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-NA/DGB-2-DU-DGSWIS-B/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-57/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-58/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-59/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-60/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-61/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-62/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-63/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-64/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-65/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/DGB-66/71-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-DGB/OUTSIDE-71/YARD-155-1:</p>

## Fire Safety Analysis

**Fire Area ID:** 071 - DG Building Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-1-DU-DGRWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-1-DU-DGRWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-2-DU-DGRWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-2-DU-DGRWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U0-71-DGB-COR-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 072-U1 - Service Water Pump Room

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
SWIS-72A-U1	Service Water Pump Room	
SWIS-72B-U1	Service Water Pump Room	
SWIS-72C-U1	Service Water Pump Room	
SWIS-72D-U1	Service Water Pump Room	
SWIS-72E-U1	Service Water Pump Room	
SWIS-PR-U1	Service Water Pump Room	

## Fire Safety Analysis

Fire Area ID: 072-U1 - Service Water Pump Room  
Fire Zone ID: SWIS-72A-U1 - Service Water Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 072-U1 - Service Water Pump Room  
Fire Zone ID: SWIS-72B-U1 - Service Water Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	072-U1 - Service Water Pump Room	Systems and Features
Fire Zone ID:	SWIS-72C-U1 - Service Water Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	072-U1 - Service Water Pump Room	Systems and Features
Fire Zone ID:	SWIS-72D-U1 - Service Water Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 072-U1 - Service Water Pump Room  
Fire Zone ID: SWIS-72E-U1 - Service Water Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-PR-U1 - Service Water Pump Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW4	SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SW8	SW Structure-Bottom of Strainer Stairwell	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43D010A	Hose Station - N1Y43D010A-FZ 72 Room S.W. INTK	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1Y43D010B	Hose Station - N1Y43D010B-FZ 72 Room S.W. INTK	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-111-1	U0-72 Detection System 1SW-111-1 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1SW-111A-1	U0-72 Detection System 1SW-111-2 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1SW-111B-1	U0-72 Detection System 1SW-111-2 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1SW-111-1	Preaction Sprinkler System, U0-72, SW Building Elevation 192' Service Water Pump Protection, Room SWIS	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1SW-111A-1	Preaction Sprinkler System, U0-72, SW Building Elevation 192' Service Water Pump Protection, Room SWIS	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1SW-111B-1	Preaction Sprinkler System, U0-72, SW Building Elevation 192' Service Water Pump Protection, Room SWIS	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-PR-U1 - Service Water Pump Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188 D850	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188 D852	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	072-U1 - Service Water Pump Room	Systems and Features
Fire Zone ID:	SWIS-PR-U1 - Service Water Pump Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-72-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 072-U1 - Service Water Pump Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump and swing charging pump via Train A power or Train B charging pump and swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump and swing charging pump via Train A power or Train B charging pump and swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump and swing charging pump via Train A power or Train B charging pump and swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW or Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3.4.RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3.6.SG Level - Steam Generator 1A/1B/1C level is monitored by narrow range Ch 1/CH 2/CH3, wide range non-safety channel.	

## Fire Safety Analysis

**Fire Area ID:** 072-U1 - Service Water Pump Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 1A/SUT 1B and diesel generator EDG1-2A or EDG-1B.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A or Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities within the area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have been provided with justifications</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 072-U1 - Service Water Pump Room

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-3), Unit 1 and 2 SWIS (Old FA 072A - New FA 072);(Old FA 072B/072C-New FA 075)(Old FA 072D/072E-New FA 076) 20 feet separation without intervening combustibles with automatic fire suppression (III.G.2.b criteria)
<b>Licensing Basis</b>	<p>As the result of a review of the current fire protection licensing basis for the SWIS, several changes were made consistent with the current, deterministic fire protection license condition. In addition, a risk-informed, performance-based integrated analysis was performed to eliminate reliance on Kaowool in the SWIS.</p> <p>Exemption Request per 08/28/2003 SNC letter to the NRC provides justification for lack of adequate separation of redundant equipment in a revision to Exemption Request No. 1-3, which was approved by the NRC in a letter dated 08/16/2005.</p> <ol style="list-style-type: none"><li>1. Service Water Pumps: Plant modifications resulted in removing the need for lubricating oil and coolant pumps, valves and their control stations in Unit 2. Accordingly, the condition in the exemption for this situation will no longer be needed and should be removed.</li><li>2. FNP Unit 2 side of strainer pit: A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 2 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li><li>3. FNP Unit 1 side of strainer pit A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 1 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li><li>4. Discharge valves to wet pit and storage pond flume: A deterministic re-analysis, consistent with the current licensing basis, shows that existing long-term manual actions regarding safe shutdown Services Water Train A and B cables are no longer required.</li><li>5. Swing Service Water Pumps: Service Water alignment procedures remove power from the subject swing pump discharge valves, thus precluding spurious valve operation and adverse impact on the Service Water system. The compliance strategy under the revised approach is unchanged.</li><li>6. Swing Service Water Pump cables in Fire Zones 72D and 72E (new Fire Area 076): The current exemption and bases for redundant swing Service Water pump cables in Fire Zones 72D and 72E (new Fire Area 076) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. Following the modifications, the fire areas (72D/72E) (new Fire Area 076) will comply with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li><li>7. Swing Service Water Pump cables in Fire Zones 72B and 72C (new Fire Area 075): The current exemption bases for redundant swing Service Water pump cables in Fire Zone 72B and 72C (new Fire Area 075) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. With installation of the modifications, the fire area (72B/72C) (new Fire Area 075) complies with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li><li>8. Raceways for Train A Service Water Pumps: An integrated risk assessment shows that safe shutdown can be achieved even if no credit is taken for the Kaowool raceway enclosures. This finding is also based, in part, on a re-determination of the safe shutdown success criterion, using traditional thermal-hydraulic techniques. The exemption should be revised not only to eliminate reliance of Kaowool but also to recognize the new success criterion.</li><li>9. Redundant raceways near the ceiling in the northeast corner: Train B raceways required for safe shutdown are wrapped with Kaowool. An integrated risk assessment shows that fire damage would not occur to these cables or the redundant Train A cables even if no credit were taken for Kaowool. Accordingly, the condition in the exemption for this configuration can be revised to eliminate reliance on Kaowool.</li><li>10. Additionally, the issue covered in the "Addendum to Exemption Request 1-3, Fire Area 72" was resolved with a plant modification, therefore the addendum can be deleted."</li></ol> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area was resolved by the revision to this Exemption Request, and by DCP 03-0-9940, DCP 03-0-9940, DCP 00-2-9686, DCP 03-1-9900, RIPB,. and various Administrative Controls.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

**Fire Area ID:** 072-U1 - Service Water Pump Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
SWIS-72A-U1	Service Water Pump Room	—	—	—	—
SWIS-72B-U1	Service Water Pump Room	—	—	—	—
SWIS-72C-U1	Service Water Pump Room	—	—	—	—
SWIS-72D-U1	Service Water Pump Room	—	—	—	—
SWIS-72E-U1	Service Water Pump Room	—	—	—	—
SWIS-PR-U1	Service Water Pump Room	D	E, R, S, N	R, B	Detection System, 1SW-111-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1SW-111A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1SW-111B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U1 - Service Water Pump Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U0-72-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1SW-111-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1SW-111A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1SW-111B-1: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

**Fire Area ID:** 072-U2 - Service Water Pump Room

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
SWIS-72A-U2	Service Water Pump Room	
SWIS-72B-U2	Service Water Pump Room	
SWIS-72C-U2	Service Water Pump Room	
SWIS-72D-U2	Service Water Pump Room	
SWIS-72E-U2	Service Water Pump Room	
SWIS-PR-U2	Service Water Pump Room	

Fire Safety Analysis

Fire Area ID:	072-U2 - Service Water Pump Room	Systems and Features
Fire Zone ID:	SWIS-72A-U2 - Service Water Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 072-U2 - Service Water Pump Room  
Fire Zone ID: SWIS-72B-U2 - Service Water Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	072-U2 - Service Water Pump Room	Systems and Features
Fire Zone ID:	SWIS-72C-U2 - Service Water Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 072-U2 - Service Water Pump Room  
Fire Zone ID: SWIS-72D-U2 - Service Water Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 072-U2 - Service Water Pump Room  
Fire Zone ID: SWIS-72E-U2 - Service Water Pump Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW4	SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-PR-U2 - Service Water Pump Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW8	SW Structure-Bottom of Strainer Stairwell	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-111-1	U0-72 Detection System 1SW-111-1 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1SW-111A-1	U0-72 Detection System 1SW-111-2 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1SW-111B-1	U0-72 Detection System 1SW-111-2 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1SW-111-1	Preaction Sprinkler System, U0-72, SW Building Elevation 192' Service Water Pump Protection, Room SWIS	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1SW-111A-1	Preaction Sprinkler System, U0-72, SW Building Elevation 192' Service Water Pump Protection, Room SWIS	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1SW-111B-1	Preaction Sprinkler System, U0-72, SW Building Elevation 192' Service Water Pump Protection, Room SWIS	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-PR-U2 - Service Water Pump Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188 D850	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188 D852	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 072-U2 - Service Water Pump Room  
**Fire Zone ID:** SWIS-PR-U2 - Service Water Pump Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 072-U2 - Service Water Pump Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump and swing charging pump via Train A power or Train B charging pump and swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump and swing charging pump via Train A power or Train B charging pump and swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump and swing charging pump via Train A power or Train B charging pump and swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump or Train B MDAFW pump and TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C} pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 072-U2 - Service Water Pump Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A or EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A or Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities within the area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have been provided with justifications</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 072-U2 - Service Water Pump Room

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-3), Unit 1 and 2 SWIS (Old FA 072A - New FA 072);(Old FA 072B/072C-New FA 075)(Old FA 072D/072E-New FA 076) 20 feet separation without intervening combustibles with automatic fire suppression (III.G.2.b criteria)
<b>Licensing Basis</b>	<p>As the result of a review of the current fire protection licensing basis for the SWIS, several changes were made consistent with the current, deterministic fire protection license condition. In addition, a risk-informed, performance-based integrated analysis was performed to eliminate reliance on Kaowool in the SWIS.</p> <p>Exemption Request per 08/28/2003 SNC letter to the NRC provides justification for lack of adequate separation of redundant equipment in a revision to Exemption Request No. 1-3, which was approved by the NRC in a letter dated 08/16/2005.</p> <ol style="list-style-type: none"> <li>1. Service Water Pumps: Plant modifications resulted in removing the need for lubricating oil and coolant pumps, valves and their control stations in Unit 2. Accordingly, the condition in the exemption for this situation will no longer be needed and should be removed.</li> <li>2. FNP Unit 2 side of strainer pit: A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 2 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li> <li>3. FNP Unit 1 side of strainer pit A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 1 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li> <li>4. Discharge valves to wet pit and storage pond flume: A deterministic re-analysis, consistent with the current licensing basis, shows that existing long-term manual actions regarding safe shutdown Services Water Train A and B cables are no longer required.</li> <li>5. Swing Service Water Pumps: Service Water alignment procedures remove power from the subject swing pump discharge valves, thus precluding spurious valve operation and adverse impact on the Service Water system. The compliance strategy under the revised approach is unchanged.</li> <li>6. Swing Service Water Pump cables in Fire Zones 72D and 72E (new Fire Area 076): The current exemption and bases for redundant swing Service Water pump cables in Fire Zones 72D and 72E (new Fire Area 076) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. Following the modifications, the fire areas (72D/72E) (new Fire Area 076) will comply with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li> <li>7. Swing Service Water Pump cables in Fire Zones 72B and 72C (new Fire Area 075): The current exemption bases for redundant swing Service Water pump cables in Fire Zone 72B and 72C (new Fire Area 075) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. With installation of the modifications, the fire area (72B/72C) (new Fire Area 075) complies with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li> <li>8. Raceways for Train A Service Water Pumps: An integrated risk assessment shows that safe shutdown can be achieved even if no credit is taken for the Kaowool raceway enclosures. This finding is also based, in part, on a re-determination of the safe shutdown success criterion, using traditional thermal-hydraulic techniques. The exemption should be revised not only to eliminate reliance of Kaowool but also to recognize the new success criterion.</li> <li>9. Redundant raceways near the ceiling in the northeast corner: Train B raceways required for safe shutdown are wrapped with Kaowool. An integrated risk assessment shows that fire damage would not occur to these cables or the redundant Train A cables even if no credit were taken for Kaowool. Accordingly, the condition in the exemption for this configuration can be revised to eliminate reliance on Kaowool.</li> <li>10. Additionally, the issue covered in the "Addendum to Exemption Request 1-3, Fire Area 72" was resolved with a plant modification, therefore the addendum can be deleted."</li> </ol> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area was resolved by the revision to this Exemption Request, and by DCP 03-0-9940, DCP 03-0-9940, DCP 00-2-9686, DCP 03-1-9900, RIPB,. and various Administrative Controls.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

**Fire Area ID:** 072-U2 - Service Water Pump Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
SWIS-72A-U2	Service Water Pump Room	—	—	—	—
SWIS-72B-U2	Service Water Pump Room	—	—	—	—
SWIS-72C-U2	Service Water Pump Room	—	—	—	—
SWIS-72D-U2	Service Water Pump Room	—	—	—	—
SWIS-72E-U2	Service Water Pump Room	—	—	—	—
SWIS-PR-U2	Service Water Pump Room	D	E, R, S, N	—	Detection System, 1SW-111-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1SW-111A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1SW-111B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	072-U2 - Service Water Pump Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1SW-111-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1SW-111A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1SW-111B-1: -- DID: Required to meet DID criteria.



## Fire Safety Analysis

**Fire Area ID:** 073 - SWIS Battery Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
SWIS-BAT-B	SWIS Battery Room-Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	073 - SWIS Battery Room-Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-BAT-B - SWIS Battery Room-Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-97-2	U0-73 Detection System 1SW-97-2 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-73/74-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188: 1-188-332-01	0:00, N. of Batt. Rm. B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188 D851	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	073 - SWIS Battery Room-Train B	Systems and Features
Fire Zone ID:	SWIS-BAT-B - SWIS Battery Room-Train B	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-73-SWIS-BAT-B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 073 - SWIS Battery Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve, or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 073 - SWIS Battery Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	073 - SWIS Battery Room-Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 073 - SWIS Battery Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 073 - SWIS Battery Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).



## Fire Safety Analysis

**Fire Area ID:** 073 - SWIS Battery Room-Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWIS-BAT-B	SWIS Battery Room-Train B	—	E, R, D	E, B	<p>Detection System, 1SW-97-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-73/74-188:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U0-73-SWIS-BAT-B-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
SWIS-BAT-A	SWIS Battery Room-Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	074 - SWIS Battery Room-Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-BAT-A - SWIS Battery Room-Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-97-1	U0-74 Detection System 1SW-97-1 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-73/74-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-S.W. INTK/S.W. INTK-74/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188: 1-188-332-02	0:00, N. of Batt. Rm. A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188 D853	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	074 - SWIS Battery Room-Train A	Systems and Features
Fire Zone ID:	SWIS-BAT-A - SWIS Battery Room-Train A	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-74-SWIS-BAT-A-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve, or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 074 - SWIS Battery Room-Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWIS-BAT-A	SWIS Battery Room-Train A	—	E, R, D	E, B	<p>Detection System, 1SW-97-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-73/74-188:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-74/76-188:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U0-74-SWIS-BAT-A-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
SWIS-SG-B-U1	SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	
SWIS-STAIR-W-U1	SWIS West Stairwell	

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-B-U1 - SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW6	West side / SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SW7	West side / SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1SW-99-1	Local CO2 system in Fire Area 75 , room number S.W. INTK, 600V LC 1-2L	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-2	Local CO2 system in Fire Area 75 , room number S.W. INTK, 4160V Swgr 1L	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-5	Local CO2 system in Fire Area 75 , room number S.W. INTK, Disc. Sw. #1B	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-1	Local CO2 system in Fire Area 75 , room number S.W. INTK, 4160V Swgr Bus 2L	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-2	Local CO2 system in Fire Area 75 , room number S.W. INTK, Disc. Sw. #2B	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1D-77-1	Wet Pipe Sprinkler System, U1-75, Diesel Building Elevation 110' Cable Tunnel - Train A, Room 75	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-B-U1 - SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188:1-188-332-01	0:00, N. of Batt. Rm. B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188 D851	0:00,	-	Yes		Yes	Yes
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188 D850	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-75-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-75-SWIS-SG-B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-STAIR-W-U1 - SWIS West Stairwell	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW5	SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-97-4	U0-75 Detection System 1SW-97-4 Room S.W. INTK	-	Yes		Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-75-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 075-U1 - SWIS 5 kV Switchgear Room B & West Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel and RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3.4.RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3.6.SG Level - Steam Generator 1A/1B/1C level is monitored by narrow range Ch 1/CH 2/CH3 and wide range non-safety channel.	

## Fire Safety Analysis

**Fire Area ID:** 075-U1 - SWIS 5 kV Switchgear Room B & West Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by {off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> 075-U1 - SWIS 5 kV Switchgear Room B & West Stairs <b>Compliance Basis:</b> NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		<b>Engineering Evaluations</b>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-3), Unit 1 and 2 SWIS (Old FA 072A - New FA 072);(Old FA 072B/072C-New FA 075)(Old FA 072D/072E-New FA 076) 20 feet separation without intervening combustibles with automatic fire suppression (III.G.2.b criteria)
<b>Licensing Basis</b>	<p>As the result of a review of the current fire protection licensing basis for the SWIS, several changes were made consistent with the current, deterministic fire protection license condition. In addition, a risk-informed, performance-based integrated analysis was performed to eliminate reliance on Kaowool in the SWIS.</p> <p>Exemption Request per 08/28/2003 SNC letter to the NRC provides justification for lack of adequate separation of redundant equipment in a revision to Exemption Request No. 1-3, which was approved by the NRC in a letter dated 08/16/2005.</p> <ol style="list-style-type: none"><li>1. Service Water Pumps: Plant modifications resulted in removing the need for lubricating oil and coolant pumps, valves and their control stations in Unit 2. Accordingly, the condition in the exemption for this situation will no longer be needed and should be removed.</li><li>2. FNP Unit 2 side of strainer pit: A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 2 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li><li>3. FNP Unit 1 side of strainer pit A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 1 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li><li>4. Discharge valves to wet pit and storage pond flume: A deterministic re-analysis, consistent with the current licensing basis, shows that existing long-term manual actions regarding safe shutdown Services Water Train A and B cables are no longer required.</li><li>5. Swing Service Water Pumps: Service Water alignment procedures remove power from the subject swing pump discharge valves, thus precluding spurious valve operation and adverse impact on the Service Water system. The compliance strategy under the revised approach is unchanged.</li><li>6. Swing Service Water Pump cables in Fire Zones 72D and 72E (new Fire Area 076): The current exemption and bases for redundant swing Service Water pump cables in Fire Zones 72D and 72E (new Fire Area 076) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. Following the modifications, the fire areas (72D/72E) (new Fire Area 076) will comply with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li><li>7. Swing Service Water Pump cables in Fire Zones 72B and 72C (new Fire Area 075): The current exemption bases for redundant swing Service Water pump cables in Fire Zone 72B and 72C (new Fire Area 075) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. With installation of the modifications, the fire area (72B/72C) (new Fire Area 075) complies with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li><li>8. Raceways for Train A Service Water Pumps: An integrated risk assessment shows that safe shutdown can be achieved even if no credit is taken for the Kaowool raceway enclosures. This finding is also based, in part, on a re-determination of the safe shutdown success criterion, using traditional thermal-hydraulic techniques. The exemption should be revised not only to eliminate reliance of Kaowool but also to recognize the new success criterion.</li><li>9. Redundant raceways near the ceiling in the northeast corner: Train B raceways required for safe shutdown are wrapped with Kaowool. An integrated risk assessment shows that fire damage would not occur to these cables or the redundant Train A cables even if no credit were taken for Kaowool. Accordingly, the condition in the exemption for this configuration can be revised to eliminate reliance on Kaowool.</li><li>10. Additionally, the issue covered in the "Addendum to Exemption Request 1-3, Fire Area 72" was resolved with a plant modification, therefore the addendum can be deleted."</li></ol> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area was resolved by the revision to this Exemption Request, and by DCP 03-0-9940, DCP 03-0-9940, DCP 00-2-9686, DCP 03-1-9900, RIPB,. and various Administrative Controls.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
SWIS-SG-B-U1	SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	E, D	—	E, R, B	FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1SW-99-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-2SW-99-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-2SW-99-2:

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U1 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-75-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-75-SWIS-SG-B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1D-77-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U0-75-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
SWIS-STAIR-W-U1	SWIS West Stairwell	—	—	R	Procedures/Recovery Actions, U0-75-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
SWIS-SG-B-U2	SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	
SWIS-STAIR-W-U2	SWIS West Stairwell	



## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-B-U2 - SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW6	West side / SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SW7	West side / SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1SW-99-1	Local CO2 system in Fire Area 75 , room number S.W. INTK, 600V LC 1-2L	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-2	Local CO2 system in Fire Area 75 , room number S.W. INTK, 4160V Swgr 1L	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-5	Local CO2 system in Fire Area 75 , room number S.W. INTK, Disc. Sw. #1B	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-1	Local CO2 system in Fire Area 75 , room number S.W. INTK, 4160V Swgr Bus 2L	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-2	Local CO2 system in Fire Area 75 , room number S.W. INTK, Disc. Sw. #2B	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1D-77-1	Wet Pipe Sprinkler System, U1-75, Diesel Building Elevation 110' Cable Tunnel - Train A, Room 75	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-B-U2 - SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188:1-188-332-01	0:00, N. of Batt. Rm. B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188 D851	0:00,	-	Yes		Yes	Yes
U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188 D850	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-75-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-75-SWIS-SG-B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-STAIR-W-U2 - SWIS West Stairwell	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW5	SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-97-4	U0-75 Detection System 1SW-97-4 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-75-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 075-U2 - SWIS 5 kV Switchgear Room B & West Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 075-U2 - SWIS 5 kV Switchgear Room B & West Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A	Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

### Licensing Action

Appendix R Exemption (No. 1-3), Unit 1 and 2 SWIS (Old FA 072A - New FA 072);(Old FA 072B/072C-New FA 075)(Old FA 072D/072E-New FA 076) 20 feet separation without intervening combustibles with automatic fire suppression (III.G.2.b criteria)

### Licensing Basis

As the result of a review of the current fire protection licensing basis for the SWIS, several changes were made consistent with the current, deterministic fire protection license condition. In addition, a risk-informed, performance-based integrated analysis was performed to eliminate reliance on Kaowool in the SWIS.

Exemption Request per 08/28/2003 SNC letter to the NRC provides justification for lack of adequate separation of redundant equipment in a revision to Exemption Request No. 1-3, which was approved by the NRC in a letter dated 08/16/2005.

1. Service Water Pumps: Plant modifications resulted in removing the need for lubricating oil and coolant pumps, valves and their control stations in Unit 2. Accordingly, the condition in the exemption for this situation will no longer be needed and should be removed.
2. FNP Unit 2 side of strainer pit: A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 2 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.
3. FNP Unit 1 side of strainer pit A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 1 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.
4. Discharge valves to wet pit and storage pond flume: A deterministic re-analysis, consistent with the current licensing basis, shows that existing long-term manual actions regarding safe shutdown Services Water Train A and B cables are no longer required.
5. Swing Service Water Pumps: Service Water alignment procedures remove power from the subject swing pump discharge valves, thus precluding spurious valve operation and adverse impact on the Service Water system. The compliance strategy under the revised approach is unchanged.
6. Swing Service Water Pump cables in Fire Zones 72D and 72E (new Fire Area 076): The current exemption and bases for redundant swing Service Water pump cables in Fire Zones 72D and 72E (new Fire Area 076) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. Following the modifications, the fire areas (72D/72E) (new Fire Area 076) will comply with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.
7. Swing Service Water Pump cables in Fire Zones 72B and 72C (new Fire Area 075): The current exemption bases for redundant swing Service Water pump cables in Fire Zone 72B and 72C (new Fire Area 075) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. With installation of the modifications, the fire area (72B/72C) (new Fire Area 075) complies with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.
8. Raceways for Train A Service Water Pumps: An integrated risk assessment shows that safe shutdown can be achieved even if no credit is taken for the Kaowool raceway enclosures. This finding is also based, in part, on a re-determination of the safe shutdown success criterion, using traditional thermal-hydraulic techniques. The exemption should be revised not only to eliminate reliance of Kaowool but also to recognize the new success criterion.
9. Redundant raceways near the ceiling in the northeast corner: Train B raceways required for safe shutdown are wrapped with Kaowool. An integrated risk assessment shows that fire damage would not occur to these cables or the redundant Train A cables even if no credit were taken for Kaowool. Accordingly, the condition in the exemption for this configuration can be revised to eliminate reliance on Kaowool.
10. Additionally, the issue covered in the "Addendum to Exemption Request 1-3, Fire Area 72" was resolved with a plant modification, therefore the addendum can be deleted."

Elimination of the reliance on Kaowool raceway fire barriers in this area was resolved by the revision to this Exemption Request, and by DCP 03-0-9940, DCP 03-0-9940, DCP 00-2-9686, DCP 03-1-9900, RIPB,. and various Administrative Controls.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
SWIS-SG-B-U2	SWIS 5 kV Disconnect Switch Train B, Switchgear Room B	E, D	—	E, R, B	FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/S.W. INTK-73/75-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/75-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-72/75-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-73/75-188: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1SW-99-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-2SW-99-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-2SW-99-2:

## Fire Safety Analysis

<b>Fire Area ID:</b>	075-U2 - SWIS 5 kV Switchgear Room B & West Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWIS-STAIR-W-U2	SWIS West Stairwell	—	E, R, D, S, N	R	-- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-75-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-75-SWIS-SG-B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 1SW-97-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Procedures/Recovery Actions, U0-75-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
SWIS-SG-A-U1	SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	
SWIS-STAIR-E-U1	SWIS East Stairwell	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-A-U1 - SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW3	SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1SW-99-3	Local CO2 system in Fire Area 76 , room number S.W. INTK, 600V LC 1-2K	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-4	Local CO2 system in Fire Area 76 , room number S.W. INTK, 4160V Swgr 1K	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-6	Local CO2 system in Fire Area 76 , room number S.W. INTK, Disc. Sw. #1A	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-3	Local CO2 system in Fire Area 76 , room number S.W. INTK, Disc. Sw. #2A	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-4	Local CO2 system in Fire Area 76 , room number S.W. INTK, 4160V Swgr Bus 2K	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1D-98-1	Wet Pipe Sprinkler System, U1-76, Diesel Building Elevation 110' Cable Tunnel - Train B, Room 76	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-S.W. INTK/S.W. INTK-74/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-A-U1 - SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188:1-188-332-02	0:00, N. of Batt. Rm. A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188 D853	0:00,	-	Yes		Yes	Yes
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188 D852	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-76-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-76-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-76-SWIS-AREA WIDE-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-76-SWIS-SG-B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-STAIR-E-U1 - SWIS East Stairwell	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW1	SW Structure-East side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SW2	SW Structure-East side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-97-5	U0-76 Detection System 1SW-97-5 Room S.W. INTK	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-76-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-76-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 076-U1 - SWIS 5 kV Switchgear Room A & East Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAPW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3.4.RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored by SG pressure Ch 1/CH 2/CH3.6.SG Level - Steam Generator 1A/1B/1C level is monitored by narrow range Ch 1/CH 2/CH3 and wide range non-safety channel.	

## Fire Safety Analysis

**Fire Area ID:** 076-U1 - SWIS 5 kV Switchgear Room A & East Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B.2.4.16 kV and 600 V power is supplied by Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-3), Unit 1 and 2 SWIS (Old FA 072A - New FA 072);(Old FA 072B/072C-New FA 075)(Old FA 072D/072E-New FA 076) 20 feet separation without intervening combustibles with automatic fire suppression (III.G.2.b criteria)
<b>Licensing Basis</b>	<p>As the result of a review of the current fire protection licensing basis for the SWIS, several changes were made consistent with the current, deterministic fire protection license condition. In addition, a risk-informed, performance-based integrated analysis was performed to eliminate reliance on Kaowool in the SWIS.</p> <p>Exemption Request per 08/28/2003 SNC letter to the NRC provides justification for lack of adequate separation of redundant equipment in a revision to Exemption Request No. 1-3, which was approved by the NRC in a letter dated 08/16/2005.</p> <ol style="list-style-type: none"><li>1. Service Water Pumps: Plant modifications resulted in removing the need for lubricating oil and coolant pumps, valves and their control stations in Unit 2. Accordingly, the condition in the exemption for this situation will no longer be needed and should be removed.</li><li>2. FNP Unit 2 side of strainer pit: A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 2 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li><li>3. FNP Unit 1 side of strainer pit A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 1 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.</li><li>4. Discharge valves to wet pit and storage pond flume: A deterministic re-analysis, consistent with the current licensing basis, shows that existing long-term manual actions regarding safe shutdown Services Water Train A and B cables are no longer required.</li><li>5. Swing Service Water Pumps: Service Water alignment procedures remove power from the subject swing pump discharge valves, thus precluding spurious valve operation and adverse impact on the Service Water system. The compliance strategy under the revised approach is unchanged.</li><li>6. Swing Service Water Pump cables in Fire Zones 72D and 72E (new Fire Area 076): The current exemption and bases for redundant swing Service Water pump cables in Fire Zones 72D and 72E (new Fire Area 076) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. Following the modifications, the fire areas (72D/72E) (new Fire Area 076) will comply with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li><li>7. Swing Service Water Pump cables in Fire Zones 72B and 72C (new Fire Area 075): The current exemption bases for redundant swing Service Water pump cables in Fire Zone 72B and 72C (new Fire Area 075) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. With installation of the modifications, the fire area (72B/72C) (new Fire Area 075) complies with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.</li><li>8. Raceways for Train A Service Water Pumps: An integrated risk assessment shows that safe shutdown can be achieved even if no credit is taken for the Kaowool raceway enclosures. This finding is also based, in part, on a re-determination of the safe shutdown success criterion, using traditional thermal-hydraulic techniques. The exemption should be revised not only to eliminate reliance of Kaowool but also to recognize the new success criterion.</li><li>9. Redundant raceways near the ceiling in the northeast corner: Train B raceways required for safe shutdown are wrapped with Kaowool. An integrated risk assessment shows that fire damage would not occur to these cables or the redundant Train A cables even if no credit were taken for Kaowool. Accordingly, the condition in the exemption for this configuration can be revised to eliminate reliance on Kaowool.</li><li>10. Additionally, the issue covered in the "Addendum to Exemption Request 1-3, Fire Area 72" was resolved with a plant modification, therefore the addendum can be deleted."</li></ol> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area was resolved by the revision to this Exemption Request, and by DCP 03-0-9940, DCP 03-0-9940, DCP 00-2-9686, DCP 03-1-9900, RIPB,. and various Administrative Controls.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
SWIS-SG-A-U1	SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	E, D	—	E, R, B	FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-74/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1SW-99-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U1 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWIS-STAIR-E-U1	SWIS East Stairwell	—	E, R, S, N	R, B	<p>Gaseous Suppression, GS-2SW-99-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Gaseous Suppression, GS-2SW-99-4:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.</p> <p>Procedures/Recovery Actions, U0-76-NA-AREA WIDE-Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Procedures/Recovery Actions, U0-76-SWIS-AREA WIDE-Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U0-76-SWIS-AREA WIDE-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U0-76-SWIS-SG-B-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1D-98-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 1SW-97-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U0-76-NA-AREA WIDE-Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Procedures/Recovery Actions, U0-76-SWIS-AREA WIDE-Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
SWIS-SG-A-U2	SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	
SWIS-STAIR-E-U2	SWIS East Stairwell	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-A-U2 - SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW3	SW Structure	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1SW-99-3	Local CO2 system in Fire Area 76 , room number S.W. INTK, 600V LC 1-2K	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-4	Local CO2 system in Fire Area 76 , room number S.W. INTK, 4160V Swgr 1K	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1SW-99-6	Local CO2 system in Fire Area 76 , room number S.W. INTK, Disc. Sw. #1A	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-3	Local CO2 system in Fire Area 76 , room number S.W. INTK, Disc. Sw. #2A	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2SW-99-4	Local CO2 system in Fire Area 76 , room number S.W. INTK, 4160V Swgr Bus 2K	-	Yes	-- E: Required to meet EEEE criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1D-98-1	Wet Pipe Sprinkler System, U1-76, Diesel Building Elevation 110' Cable Tunnel - Train B, Room 76	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-S.W. INTK/S.W. INTK-74/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-SG-A-U2 - SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188: 1-188-332-02	0:00, N. of Batt. Rm. A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188 D853	0:00,	-	Yes		Yes	Yes
U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188 D852	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-76-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-76-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-76-SWIS-AREA WIDE-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U0-76-SWIS-SG-B-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWIS-STAIR-E-U2 - SWIS East Stairwell	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
SW1	SW Structure-East side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SW2	SW Structure-East side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1SW-97-5	U0-76 Detection System 1SW-97-5 Room S.W. INTK	-	Yes		Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-76-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U0-76-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 076-U2 - SWIS 5 kV Switchgear Room A & East Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 076-U2 - SWIS 5 kV Switchgear Room A & East Stairs  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

### Licensing Action

Appendix R Exemption (No. 1-3), Unit 1 and 2 SWIS (Old FA 072A - New FA 072);(Old FA 072B/072C-New FA 075)(Old FA 072D/072E-New FA 076) 20 feet separation without intervening combustibles with automatic fire suppression (III.G.2.b criteria)

### Licensing Basis

As the result of a review of the current fire protection licensing basis for the SWIS, several changes were made consistent with the current, deterministic fire protection license condition. In addition, a risk-informed, performance-based integrated analysis was performed to eliminate reliance on Kaowool in the SWIS.

Exemption Request per 08/28/2003 SNC letter to the NRC provides justification for lack of adequate separation of redundant equipment in a revision to Exemption Request No. 1-3, which was approved by the NRC in a letter dated 08/16/2005.

1. Service Water Pumps: Plant modifications resulted in removing the need for lubricating oil and coolant pumps, valves and their control stations in Unit 2. Accordingly, the condition in the exemption for this situation will no longer be needed and should be removed.
2. FNP Unit 2 side of strainer pit: A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 2 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.
3. FNP Unit 1 side of strainer pit A deterministic re-analysis, consistent with the current licensing basis, shows that fire damage to cables on the Unit 1 side of the strainer pit cannot result in spurious operation of the valves. Accordingly, the bases for the condition in the exemption for this situation should be modified to remove reliance on Kaowool.
4. Discharge valves to wet pit and storage pond flume: A deterministic re-analysis, consistent with the current licensing basis, shows that existing long-term manual actions regarding safe shutdown Services Water Train A and B cables are no longer required.
5. Swing Service Water Pumps: Service Water alignment procedures remove power from the subject swing pump discharge valves, thus precluding spurious valve operation and adverse impact on the Service Water system. The compliance strategy under the revised approach is unchanged.
6. Swing Service Water Pump cables in Fire Zones 72D and 72E (new Fire Area 076): The current exemption and bases for redundant swing Service Water pump cables in Fire Zones 72D and 72E (new Fire Area 076) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. Following the modifications, the fire areas (72D/72E) (new Fire Area 076) will comply with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.
7. Swing Service Water Pump cables in Fire Zones 72B and 72C (new Fire Area 075): The current exemption bases for redundant swing Service Water pump cables in Fire Zone 72B and 72C (new Fire Area 075) remain unchanged because they do not involve Kaowool. Although the walls are unrated as clearly stated in the licensing basis, the unlikely potential exists for fire propagation between redundant trains in the event of a severe, uncontrolled fire. Nevertheless, an upgrade to the barriers was determined to be a cost-effective modification that could enhance fire safety and help compensate for other elements of defense-in-depth that have been modified as part of the risk-informed, performance-based approach. With installation of the modifications, the fire area (72B/72C) (new Fire Area 075) complies with the separation criteria of 10 CFR 50, Appendix R, Section III.G.2 required by the FNP Fire Protection Program. Therefore, a condition in the exemption will not be required for these new fire areas.
8. Raceways for Train A Service Water Pumps: An integrated risk assessment shows that safe shutdown can be achieved even if no credit is taken for the Kaowool raceway enclosures. This finding is also based, in part, on a re-determination of the safe shutdown success criterion, using traditional thermal-hydraulic techniques. The exemption should be revised not only to eliminate reliance of Kaowool but also to recognize the new success criterion.
9. Redundant raceways near the ceiling in the northeast corner: Train B raceways required for safe shutdown are wrapped with Kaowool. An integrated risk assessment shows that fire damage would not occur to these cables or the redundant Train A cables even if no credit were taken for Kaowool. Accordingly, the condition in the exemption for this configuration can be revised to eliminate reliance on Kaowool.
10. Additionally, the issue covered in the "Addendum to Exemption Request 1-3, Fire Area 72" was resolved with a plant modification, therefore the addendum can be deleted."

Elimination of the reliance on Kaowool raceway fire barriers in this area was resolved by the revision to this Exemption Request, and by DCP 03-0-9940, DCP 03-0-9940, DCP 00-2-9686, DCP 03-1-9900, RIPB,. and various Administrative Controls.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
SWIS-SG-A-U2	SWIS 5 kV Disconnect Switch Train A, Switchgear Room A	E, D	—	E, R, B	FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-74/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/S.W. INTK-75/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/S.W. INTK-74/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/S.W. INTK-72/76-188: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A-188-2: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1SW-99-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-1SW-99-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	076-U2 - SWIS 5 kV Switchgear Room A & East Stairs	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Gaseous Suppression, GS-2SW-99-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Gaseous Suppression, GS-2SW-99-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. Procedures/Recovery Actions, U0-76-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U0-76-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U0-76-SWIS-AREA WIDE-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U0-76-SWIS-SG-B-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A- 188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/S.W. INTK-SWIS-STAIR-E/SWIS-SG-A- 188-2: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U0-76-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U0-76-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
SWIS-STAIR-E-U2	SWIS East Stairwell	—	—	R, B	

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0601	Drumming Area/Combustible Storage Room	
0602	Passageway/Combustible Storage Room	
0603	Drum Storage Area/Combustible Storage Room	
2601	Drumming Area/Combustible Storage Room	
2602	Passageway/Combustible Storage Room	
2603	Drum Storage Area/Combustible Storage Room	

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Fire Zone ID:** 0601 - Drumming Area/Combustible Storage Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D118	Hose Station - N1V43D118-FZ 93 Room 602	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-134-1	U1-93 Detection System 1A-134-1 Room 602	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
1A-134-2	U1-93 Detection System 1A-134-2 Room 603	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-601/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-602/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-602/408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-603/407-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-603/408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/601-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-219/602-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/601-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-328/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-328/602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-603/OUTSIDE-93/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/601-S08/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/601-S08/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/602-S08/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/602-S08/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/604-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-603/329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-603/604-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-602/331-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Fire Zone ID:** 0601 - Drumming Area/Combustible Storage Room

### Systems and Features

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-207/602-4/93-121 329A	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/602-S08/93-121 332	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/604-93/4-131 329	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	093 - Aux Building	Systems and Features
Fire Zone ID:	0602 - Passageway/Combustible Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A34	Aux. Bldg-130'-Drumming Storage Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D118	Hose Station - N1V43D118-FZ 93 Room 602	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	093 - Aux Building	Systems and Features
Fire Zone ID:	0603 - Drum Storage Area/Combustible Storage Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Fire Zone ID:** 2601 - Drumming Area/Combustible Storage Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D118	Hose Station - N2V43D118-FZ 4 Room 2602	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-134-3	U1-93 Detection System 1A-134-3 Room 2602	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
1A-134-4	U1-93 Detection System 1A-134-4 Room 2603	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2602/2405-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2602/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2603/2408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2603/407-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2603/OUTSIDE-93/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2602/2604-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2603/2604-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2329/2602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2329/2603-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2601/2207-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2601/2309-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2208-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2219-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2328-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/STAIR 8-4/S08-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	093 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2601 - Drumming Area/Combustible Storage Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2602/2604-4/93-131 2329	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/STAIR 8-4/S08-131 2332	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U0-93-AUX BUILDING-2602-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	093 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2602 - Passageway/Combustible Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A67	Aux.Bldg.-130'-Drum Storage Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D118	Hose Station - N2V43D118-FZ 4 Room 2602	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-134-5	Preaction Sprinkler System, U0-93, SGBD Panel Rooms and Drum Storage Rooms , Room 2602	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 093 - Aux Building  
Fire Zone ID: 2603 - Drum Storage Area/Combustible Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C/2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C/2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C/2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B/SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-1B/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.



## Fire Safety Analysis

<b>Fire Area ID:</b>	093 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0601	Drumming Area/Combustible Storage Room	—	E, R	—	<p>Detection System, 1A-134-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-134-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-601/406-93/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-602/406-93/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-602/408-93/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-603/407-93/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-603/408-93/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-207/601-4/93-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-207/602-4/93-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-207/602-4/93-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-219/602-4/93-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-309/601-4/93-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-309/602-4/93-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-309/602-4/93-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-328/602-4/93-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-328/602-4/93-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-603/OUTSIDE-93/YARD-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-STAIR 8/601-S08/93-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-STAIR 8/601-S08/93-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-STAIR 8/602-S08/93-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-STAIR 8/602-S08/93-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-602/329-93/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-602/604-93/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-603/329-93/4-139:</p>

## Fire Safety Analysis

**Fire Area ID:** 093 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-603/604-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-602/331-93/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0602	Passageway/Combustible Storage Room	—	—	—	—
0603	Drum Storage Area/Combustible Storage Room	—	—	—	—
2601	Drumming Area/Combustible Storage Room	—	E, R, D	E, B	Detection System, 1A-134-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 1A-134-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2602/2405-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2602/406-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2603/2408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2603/407-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2603/OUTSIDE-93/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2602/2604-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2603/2604-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2329/2602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2329/2603-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2601/2207-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2601/2309-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2208-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2219-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2328-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/STAIR 8-4/S08-131: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	093 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-2602/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U0-93-AUX BUILDING-2602-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-134-5: -- EEEE/LA: Required to support a fire area boundary evaluation.
2602	Passageway/Combustible Storage Room	E	—	—	
2603	Drum Storage Area/Combustible Storage Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0101	101 Waste Gas Decay Tank Room	
0102	102 Valve Compartment Room	
0103	103 Corridor	
0104	104 Passageway to Unit 2	
0105	105 Catalytic H2 Recombiner 1A Room	
0106	106 Catalytic H2 Recombiner 1B Room	
0108	108 Waste Monitor Tank Room	
0109	109 Waste Monitor Tank Pump Room	
0110	110 Monitor Control Panel Room	
0111	111 Containment Spray Pump Room 1A	
0112	112 Access to Tendon Access Gallery	
0113	113 Valve Encapsulation	
0114	114 Pipe Chase	
0115	115 Hallway	
0118	118 Floor Drain Tank Room	
0119	119 Waste Holdup Tank Room	
0120	120 Corridor	
0121	121 Floor Drain Tank Pump Room	
0122	122 Waste Evaporator Feed Pump Room	
0123	123 Pipe Chase	
0124	124 Valve Encapsulation	
0125	125 Containment Spray Pump Room 1B	
0126	126 Pipe Chase	
0127	127 Pipe Chase	
0128	128 RHR Heat Exchanger Room	
0129	129 RHR Low Head Pump Room	
0130	130 Pipe Chase	
0131	131 RHR Low Head Pump Room	
0169	169 Duct and Pipe Chase	
0183	183 Tendon Access Gallery Entrance	
0184	184 Piping Penetration Room, El. 100'-0"	
0196	196 Access to Tendon Access Gallery	
0223	223 Piping Penetration Room, El. 121'-0"	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0101 - 101 Waste Gas Decay Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-132-1	U1-1 Detection System 1A-132-1 Room 101	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-132-2	U1-1 Detection System 1A-132-2 Room 102	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-101/2101-U1-1/U2-1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-102/2102-U1-1/U2-1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-101/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-102/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-102/104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-101/103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-102/103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-101/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-001 - Aux Building	Systems and Features
Fire Zone ID:	0102 - 102 Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0103 - 103 Corridor	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D103	Hose Station - N1V43D103-FZ 1 Room 103	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-132-3	U1-1 Detection System 1A-132-3 Room 103	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-132-5	U1-1 Detection System 1A-132-5 Room 105	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-132-6	U1-1 Detection System 1A-132-6 Room 106	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-103/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-105/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-105/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-106/164-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-103/104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-105/104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-107/106-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-107/103-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-101/103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-102/103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-103/109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-105/109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-105/110-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-106/108-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-103/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0103 - 103 Corridor	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-107/106-90/1-83: 1-083-111-04	0:00, W. of 106	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-107/103-90/1-83: 1-083-111-01	0:00, S. of 103	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-107/103-90/1-83: 1-083-111-02	0:00, N. of 107	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-107/103-90/1-83 102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 457	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 497	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 498	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-103-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0104 - 104 Passageway to Unit 2	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D102	Hose Station - N1V43D102-FZ 1 Room 110	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-2	U1-1 Detection System 1A-100-2 Room 109	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-100-3	U1-1 Detection System 1A-100-3 Room 110	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-132-4	U1-1 Detection System 1A-132-4 Room 104	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-104/2104-U1-1/U2-1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-104/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-109/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-110/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-110/169-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-102/104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-103/104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-105/104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-108/109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-109/110-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-110/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/110-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-103/109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-105/109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-105/110-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-109/118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-109/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/110-S02/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0104 - 104 Passageway to Unit 2	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-104/2104-U1-1/U2-1-83 101	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/110-S02/1-83 104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-104-Plant staff Training	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-1-AUX BUILDING-104-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-001 - Aux Building	Systems and Features
Fire Zone ID:	0105 - 105 Catalytic H2 Recombiner 1A Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A9	Aux. Bldg-83'-Recombiner Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-001 - Aux Building	Systems and Features
Fire Zone ID:	0106 - 106 Catalytic H2 Recombiner 1B Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A9-1	Aux. Bldg-83'-Recombiner Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0108 - 108 Waste Monitor Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-1	U1-1 Detection System 1A-100-1 Room 108	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-108/166-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-108/167-1/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-108/109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-106/108-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-107/108-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-108/118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-108/119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-108/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-107/108-90/1-83: 1-083-111-03	0:00, S. of 107	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-001 - Aux Building	Systems and Features
Fire Zone ID:	0109 - 109 Waste Monitor Tank Pump Room	

Extinguishers

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Hose Stations

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Active Fire Protection - Detection

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Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-001 - Aux Building  
Fire Zone ID: 0110 - 110 Monitor Control Panel Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A10	Aux. Bldg-83'-Monitoring Cont. Pnl Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D102	Hose Station - N1V43D102-FZ 1 Room 110	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0111 - 111 Containment Spray Pump Room 1A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A21	Aux. Bldg-77'-Spray Pump Room Rm 111	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-4	U1-1 Detection System 1A-100-4 Room 111	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-111/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-111/170-1/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-111/171-1/95-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-111/183-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-111/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-112/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-113/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-114/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-111/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-STAIR 2/111-S02/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-111/115-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-111/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-112/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-111/115-1/1-83 106	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	1-001 - Aux Building	Systems and Features
Fire Zone ID:	0111 - 111 Containment Spray Pump Room 1A	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0112 - 112 Access to Tendon Access Gallery	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-112/183-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-112/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-112/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-112/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-112/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-112/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0113 - 113 Valve Encapsulation	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-14	U1-1 Detection System 1A-100-14 Room 113	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-113/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-113/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-113/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-113/114-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0114 - 114 Pipe Chase	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-114/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-114/111-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-114/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-113/114-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-114/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0115 - 115 Hallway	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-115/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-115/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-111/115-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-115/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-111/115-1/1-83 106	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-115-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0118 - 118 Floor Drain Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-5	U1-1 Detection System 1A-100-5 Room 118	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-118/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-118/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-108/118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-109/118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-118/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-118/119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0119 - 119 Waste Holdup Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-6	U1-1 Detection System 1A-100-6 Room 119	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-119/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-108/119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-119/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-118/119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-119/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0120 - 120 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A44	Aux. Bldg-83'-Outside RHR Heat Exchgr Rm	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-7	U1-1 Detection System 1A-100-7 Room 120	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-120/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-118/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-120/122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-131/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-109/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-120/121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/120-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-129/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-131/120-1/1-83 112	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-129/120-1/1-83 111	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0121 - 121 Floor Drain Tank Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-8	U1-1 Detection System 1A-100-8 Room 121	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-120/121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-121/122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/121-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-123/121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0122 - 122 Waste Evaporator Feed Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-9	U1-1 Detection System 1A-100-9 Room 122	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-0122/0185-1/6-100	3:00, , U1 3 hr. Rated Barrier at ele 83 between Rooms 122/185 and fire areas 1/6	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-120/122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-121/122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-122/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-123/122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-001 - Aux Building  
Fire Zone ID: 0123 - 123 Pipe Chase

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-123/117-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-123/246-1/9-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-123/246-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-123/124-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-123/126-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-123/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-117/123-9/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-117/123-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-123/127-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-123/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-123/121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-123/122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-123/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0124 - 124 Valve Encapsulation	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-15	U1-1 Detection System 1A-100-15 Room 124	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-124/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-123/124-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-124/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-124/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-124/126-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0125 - 125 Containment Spray Pump Room 1B	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-10	U1-1 Detection System 1A-100-10 Room 125	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-125/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-110/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/125-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/125-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-124/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-126/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-124/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-113/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-114/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-115/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-125/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/125-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-111/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-114/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-115/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Fire Zone ID:** 0125 - 125 Containment Spray Pump Room 1B

**Systems and Features**

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0126 - 126 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-126/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-123/126-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-126/125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-124/126-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-126/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0127 - 127 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-127/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-127/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-123/127-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-127/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-127/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0128 - 128 RHR Heat Exchanger Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A43	Aux. Bldg-83'-RHR Heat Exchanger Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-11	U1-1 Detection System 1A-100-11 Room 128	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-128/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-128/Stair 1-1/S01-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-118/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-119/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-129/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-131/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0129 - 129 RHR Low Head Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-12	U1-1 Detection System 1A-100-12 Room 129	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-129/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-129/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-127/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-129/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-130/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-131/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-122/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-126/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-127/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-127/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-129/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-129/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-129/120-1/1-83 111	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

Fire Area ID: 1-001 - Aux Building  
Fire Zone ID: 0129 - 129 RHR Low Head Pump Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0130 - 130 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-130/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-130/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S -130/131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-130/131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Fire Zone ID:** 0131 - 131 RHR Low Head Pump Room

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-100-13	U1-1 Detection System 1A-100-13 Room 131	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-131/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-131/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-131/CHASE-1/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-131/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-131/120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-131/129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S -130/131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-131/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-130/131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-131/128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-03	0:00, F. of 236	-	Yes		Yes	-
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-04	0:00, F. of 236	-	Yes		Yes	-
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-05	0:00, F. of 236	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-131/120-1/1-83 112	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes



## Fire Safety Analysis

Fire Area ID: 1-001 - Aux Building  
Fire Zone ID: 0131 - 131 RHR Low Head Pump Room

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0169 - 169 Duct and Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-110/169-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-169/224-1/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-169/184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-169/Stair 2-1/S02-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-169/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-169/116-1/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-169/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-169/163-1/4-100: 1-100-113-06	0:00, N. of 169	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-169/168-1/4-100: 1-100-113-05	0:00, W. of 169	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Fire Zone ID:** 0183 - 183 Tendon Access Gallery Entrance

**Systems and Features**

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D124	Hose Station - N1V43D124-FZ 1 Room 184	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-10	U1-1 Detection System 1A-101-10 Room 183	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-102-7	U1-1 Detection System 1A-102-7 Room 184	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-111/183-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-111/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-112/183-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-112/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-113/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-114/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-115/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-124/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-125/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-126/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-127/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-129/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-131/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-183/223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-184/223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/184-8/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/184-9/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-123/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-169/184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-183/182-1/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE (U1)/184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-183/171-1/95-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-184/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-123/184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-171/183-95/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0183 - 183 Tendon Access Gallery Entrance	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-183/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/184-S02/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/184-S02/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-SE-184/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-171/183-95/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-183/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-184/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-183/162-1/4-100 163	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-183-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-001 - Aux Building  
Fire Zone ID: 0184 - 184 Piping Penetration Room, El. 100'-0"

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Fire Zone ID:** 0196 - 196 Access to Tendon Access Gallery

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0223 - 223 Piping Penetration Room, El. 121'-0"	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-45-1	U1-1 Detection System 1A-45-1 Room 223	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-45-2	Praaction Sprinkler System, U1-1, Aux Building Elevation 121' Pipe Penetration Room & Tendon Access, Room 223	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-172/223-5/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-181/223-5/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-183/223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-184/223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-223/333-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-223/334-1/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-223/347-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/223-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-223/222-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-224/223-18/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-233/223-21/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-235/223-23/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-246/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-216/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-217/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-218/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-223/241-1/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-223/CTMT-1/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/223-S02/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/223-S02/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-223/236-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0223 - 223 Piping Penetration Room, El. 121'-0"	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-02	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-03	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-04	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-05	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-223/333-1/35-139: 1-139-120-09	0:00, F. of 333	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-223/334-1/34-139: 1-139-119-18	0:00, F. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-223/334-1/34-139: 1-139-119-19	0:00, F. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-223/334-1/34-139: 1-139-120-08	0:00, F. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-223/347-1/35-139: 1-139-120-11	0:00, F. of 347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-223/347-1/35-139: 1-139-120-14	0:00, F. of 347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-STAIR 2/223-S02/1-121 214	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT and stopping the reactor makeup water pumps to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A/B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored in the Control Room.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, DOEJ-SM-03-0415-001    Applicability of NFPA 80 Door Closer Requirements
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation addresses a select number of fire doors that occasionally may not automatically latch closed due to "abnormal air pressure".</p> <p>Bases for Acceptability:</p> <p>The specific fire doors cited are PA101, 201 and 497. The evaluation justifies the door latching deviation by taking credit for plant staff that ensure all fire doors are closed after entry or egress.</p>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A    Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

Fire Area ID: 1-001 - Aux Building		Previously Approved Engineering Evaluations
Compliance Basis: Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach		
Licensing Action	Appendix R Exemption (No. 1-36), Unit 1 Auxiliary Building Elevation 83 ft., 100 ft., and 121 ft. (Fire Area 1-001) Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the charging line isolation valves, pressurizer PORVs and block valves and the main steam atmospheric relief valves.</li><li>• Manual action within the area (to restore instrument air to the pressurizer PORVs) is not an immediate requirement, and considered a long term manual action.</li><li>• A sprinkler system modification has been completed in the hatchway area of room 163 such that upon activation, it will form a water curtain to prevent the spread of fire to other plant areas via the non-rated steel hatchway.</li></ul> <p>For charging pump operation:</p> <ul style="list-style-type: none"><li>• There is a high degree of separation between rooms 183 and 223.</li><li>• The part of room 223 through which the train-B charging pump room cooler and the swing charging pump room cooler cables are routed is covered by an automatic sprinkler system.</li><li>• Both rooms are protected by automatic smoke detection system.</li></ul> <p>Although not specifically addressed in the APC and NRC correspondence for this exemption request, the FSAR provided the following justification for the lack of area wide smoke detection in this fire area:</p> <ul style="list-style-type: none"><li>• The rooms without detection are duct and pipe chases, and tendon access rooms that do not contain any safe shutdown equipment or raceways.</li><li>• The rooms do not contain any flammable or combustible materials except for room 112, which contains IEEE 383 qualified cable insulation.</li></ul> <p>For Initiation of Safety Signals:</p> <ul style="list-style-type: none"><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For the non-fire rated hatch covers:</p> <ul style="list-style-type: none"><li>• Suppression system in room 163 in the area of the subject steel hatch cover</li><li>• Analysis of safe shutdown showed that physical separation was adequate</li><li>• Detection system provided in rooms 163 and 103</li><li>• Sprinkler systems in room 345 and 454 will serve the purpose of a water curtain to prevent the passage of fire through the non-rated steel hatch.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA20; panel Q1R42B0001B, breakers LB07 and LB14.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0101	101 Waste Gas Decay Tank Room	—	E, R, S	R, B	<p>Detection System, 1A-132-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, 1A-132-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U0-FNP-N-101/2101-U1-1/U2-1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-102/2102-U1-1/U2-1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-101/151-1/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-102/151-1/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-102/104-1/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-101/103-1/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-102/103-1/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-101/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p>
0102	102 Valve Compartment Room	—	—	—	—
0103	103 Corridor	—	E, R, D, S	E, R, B	<p>Detection System, 1A-132-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, 1A-132-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, 1A-132-6:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-103/151-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-103/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-103/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-105/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-105/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-106/164-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-103/104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-105/104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-107/106-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-107/103-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-101/103-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-102/103-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-103/109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-105/109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-105/110-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-106/108-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-103/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/105-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-1-AUX BUILDING-103-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0104	104 Passageway to Unit 2	—	E, R, D, S	E, R, B	Detection System, 1A-100-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, 1A-100-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, 1A-132-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-N-104/2104-U1-1/U2-1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-104/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-109/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-110/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-110/169-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-102/104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-103/104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-105/104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-108/109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-109/110-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-110/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/110-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-103/109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-105/109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-105/110-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-109/118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-109/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/110-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. Plant staff Training, U1-1-AUX BUILDING-104-Plant staff Training: -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-1-AUX BUILDING-104-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0105	105 Catalytic H2 Recombiner 1A Room	—	—	—	—
0106	106 Catalytic H2 Recombiner 1B Room	—	—	—	—
0108	108 Waste Monitor Tank Room	—	E, R, S	R, B	Detection System, 1A-100-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-108/166-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-108/167-1/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-108/109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-106/108-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-107/108-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-108/118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-108/119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-108/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0109	109 Waste Monitor Tank Pump Room	—	—	—	—
0110	110 Monitor Control Panel Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0111	111 Containment Spray Pump Room 1A	—	E, R, S	R, B	Detection System, 1A-100-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-111/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/170-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/171-1/95-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/183-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-112/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-113/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-114/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-111/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-111/115-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-111/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-112/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0112	112 Access to Tendon Access Gallery	—	—	R, B	FireBarrier, U1-FNP-Ceiling-112/183-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-112/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-112/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-112/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-112/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-112/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0113	113 Valve Encapsulation	—	E, R, S	R, B	Detection System, 1A-100-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-113/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-113/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-113/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-113/114-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0114	114 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-114/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-114/111-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-114/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-113/114-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-114/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0115	115 Hallway	—	—	E, R, B	FireBarrier, U1-FNP-Ceiling-115/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-115/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-111/115-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-115/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-1-AUX BUILDING-115-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0118	118 Floor Drain Tank Room	—	E, R, S	R, B	Detection System, 1A-100-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-118/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-118/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-108/118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-109/118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-118/128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-118/119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0119	119 Waste Holdup Tank Room	—	E, R, S	R, B	Detection System, 1A-100-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-119/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-108/119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-119/128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-118/119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-119/OUTSIDE-1/YARD-83:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0120	120 Corridor	—	E, R, S	R, B	-- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Detection System, 1A-100-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-120/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-118/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-120/122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-131/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-109/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-120/121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/120-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-129/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0121	121 Floor Drain Tank Pump Room	—	E, R, S	R, B	Detection System, 1A-100-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-S-120/121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-121/122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-117/121-9/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-123/121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0122	122 Waste Evaporator Feed Pump Room	—	E, R, S	R, B	Detection System, 1A-100-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-CEILING-0122/0185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-120/122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-121/122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-122/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-123/122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0123	123 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-123/117-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-123/246-1/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-123/246-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-123/124-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-123/126-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-123/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-117/123-9/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-117/123-9/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-123/127-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-123/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-123/121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-123/122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-123/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0124	124 Valve Encapsulation	—	E, R, S	R, B	Detection System, 1A-100-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-124/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-123/124-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-124/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-124/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-124/126-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0125	125 Containment Spray Pump Room 1B	—	E, R, D, S, N	R, B	Detection System, 1A-100-10: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-125/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-110/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/125-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-117/125-9/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-124/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-126/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-124/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-113/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-114/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-115/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-125/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/125-S02/1-83:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-111/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-114/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-115/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0126	126 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-126/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-123/126-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-126/125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-124/126-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-126/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0127	127 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-127/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-127/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-123/127-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-127/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-127/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0128	128 RHR Heat Exchanger Room	—	E, R, S	R, B	Detection System, 1A-100-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-128/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-128/Stair 1-1/S01-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-118/128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0129	129 RHR Low Head Pump Room	—	E, R, S, N	R, B	<p>FireBarrier, U1-FNP-S-119/128-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-128/OUTSIDE-1/YARD-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-128/OUTSIDE-1/YARD-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-129/128-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-131/128-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-100-12:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-129/184-1/1-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-129/185-1/6-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-127/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-129/CTMT-1/55-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-130/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-131/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-122/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-126/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-127/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-127/129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-129/120-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-129/128-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0130	130 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-130/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-130/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S -130/131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-130/131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0131	131 RHR Low Head Pump Room	—	E, R, S, N	R, B	Detection System, 1A-100-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-131/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-131/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-131/CHASE-1/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-131/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-131/120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-131/129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S -130/131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-131/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-130/131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-131/128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0169	169 Duct and Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-110/169-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-169/224-1/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-169/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-169/Stair 2-1/S02-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-169/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-169/116-1/8-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-169/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0183	183 Tendon Access Gallery Entrance	—	E, R, D, S, N	E, R, B	Detection System, 1A-101-10: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-102-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-111/183-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-112/183-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-112/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-113/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-114/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-115/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-124/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-125/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-001 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-126/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-127/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-129/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-131/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-183/223-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-184/223-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/184-8/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-117/184-9/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-123/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-169/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-183/182-1/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE (U1)/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-183/171-1/95-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-184/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-123/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-171/183-95/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-183/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-SE-184/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/184-S02/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/184-S02/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-171/183-95/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-183/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-184/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-1-AUX BUILDING-183-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0184	184 Piping Penetration Room, El. 100'-0"	—	—	—	—
0196	196 Access to Tendon Access Gallery	—	—	R, B	FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0223	223 Piping Penetration Room, El. 121'-0"	D	E, R, S	R, B	<p>Detection System, 1A-45-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-172/223-5/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-181/223-5/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-183/223-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-184/223-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-223/333-1/35-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-223/334-1/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-223/347-1/35-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-116/223-8/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-223/222-1/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-224/223-18/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-233/223-21/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-235/223-23/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-246/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-209/223-1/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-216/223-1/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-217/223-1/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-218/223-1/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-223/241-1/6-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-223/CTMT-1/55-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-Elev 2/223-S02/1-121:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/223-S02/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-223/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-45-2: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0140-U1	140 Waste Gas Decay Tank Drain Filter Room	
0151-U1	151 Waste Gas Decay Tank Rooms	
0152-U1	152 Valve Compartment Room	
0153-U1	153 Waste Gas Compressor Room	
0154-U1	154 Waste Evaporator Steam Generator Room	
0154A-U1	154A Valve Compartment Room	
0155-U1	155 Passageway to Unit 2(1)	
0156-U1	156 Holdup Tank Room	
0157-U1	157 Holdup Tank Room	
0158-U1	158 Holdup Tank Room	
0159-U1	159 Recycle Evaporator Feed Pump Room	
0160-U1	160 Hatch Area	
0161-U1	161 Corridor	
0162-U1	162 Hallway	
0163-U1	163 WDS Control Panel Room	
0164-U1	164 Laundry and Hot Shower Tank Room/Storage Room	
0165-U1	165 Waste Gas Decay Tank Room	
0166-U1	166 Waste Gas Decay Tank Room	
0168-U1	168 Chemical and Laundry Drain Tank Room	
0170-U1	170 Letdown Heat Exchanger Room	
0175-U1	175 Hallway	
0176-U1	176 Secondary Spent-Resin Storage Tank Room	
0177-U1	177 Pump Room	
0178-U1	178 Filter Room	
0180-U1	180 Recycle Evaporator Steam Generator Room	
0186-U1	186 Boric Acid Area	
0187-U1	187 Hydro Test Pump Room	
0188-U1	188 Boric Acid Tank Area	
0203-U1	203 Waste Condenser Tanks and Pump Room	
0204-U1	204 Waste Evaporator Package Room	
0205-U1	205 Passageway to Unit 2	
0206-U1	206 Heat Exchanger Room	
0207-U1	207 Hatch Area	
0208-U1	208 Corridor	
0209-U1	209 Hallway	
0215-U1	215 Duct and Pipe Chase	
0216-U1	216 Valve Compartments Area	
0217-U1	217 Volume Control Tank Room	
0218-U1	218 Chiller Unit Room	
0219-U1	219 Pipe Chase	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0220-U1	220 Valve Compartment Room	
0221-U1	221 Primary Spent-Resin Storage Tank Room	
0222-U1	222 Corridor	
0230-U1	230 Recycle Evaporator Package Room	
0231-U1	231 Sluice Pump Room	
0232-U1	232 Sluice Filter Room	
0236-U1	236 Duct Chase	
0237-U1	237 Corridor	
0238-U1	238 Cask Storage Area	
0239-U1	239 Transfer Canal	
0240-U1	240 Spent-Fuel Pool Room	
0253-U1	253 Valve Compartment	
0301-U1	301 Seal Water Filter Room	
0302-U1	302 Recycle Evaporator Feed Filter Room	
0303-U1	303 Reactor Coolant Filter Room	
0304-U1	304 Waste Monitor	
0305-U1	305 Seal Injection Filter Room	
0306-U1	306 Recycle Evaporator Feed Demineralizer Room	
0307-U1	307 Valve Compartment Room	
0308-U1	308 Waste Condensate and Monitor Tank Demineralizer Room	
0309-U1	309 Hatch Area	
0310-U1	310 Valve Compartment Room	
0311-U1	311 Recycle Evaporator Concentrates Filter Room	
0312-U1	312 Corridor	
0313-U1	313 Floor Drain and Laundry Tank Filter Room	
0314-U1	314 Waste Evaporator Feed Filter Room	
0315-U1	315 Recycle Waste Condenser Filter Room	
0316-U1	316 Passageway to Unit 2	
0322-U1	322 Hallway	
0323-U1	323 Sample Room	
0324-U1	324 Primary Chemistry Lab	
0325-U1	325 Counting Room/Spectro-photometer Lab	
0326-U1	326 Radiochemistry Lab	
0327-U1	327 Valve Access Area	
0328-U1	328 BTR Demineralizer Room	
0329-U1	329 Pipe Tunnel	
0330-U1	330 Chiller Surge Tanks Pump Room	
0331-U1	331 Valve Access Area	
0332-U1	332 MCC 1A/2A Area	
0340-U1	340 Demineralizer Compartment	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0341-U1	341 Pipe Chase	
0342-U1	342 Spent-Fuel Pool Pump Room	
0348-U1	348 Cask Wash Area	
0351-U1	Chiller Surge Tank Room	
0400-U1	Primary Access Point	
0402-U1	402 Passage to Unit 2	
0403-U1	403 Hot Instrument Shop	
0405-U1	405 Hatch Room	
0406-U1	406 Decontamination Room	
0407-U1	407 Hot Machine Shop	
0408-U1	408 Hallway	
0409-U1	409 Hallway	
0410A-U1	410A 600-V Load Center	
0410B-U1	410B 600-V Load Center	
0415-U1	415 Corridor	
0417-U1	417 Corridor	
0418-U1	418 Auxiliary Building and Containment Purge Vent Equipment Room	
0419-U1	419 Demineralizer Hatch Area	
0422-U1	422 Corridor	
0423-U1	423 Valve Compartment	
0424-U1	424 Demineralizer Compartment	
0425-U1	425 Demineralizer Compartment	
0426-U1	426 Demineralizer Compartment	
0427-U1	427 Demineralizer Compartment	
0429-U1	429 Containment Purge Air Equipment Room	
0432-U1	432 Corridor	
0438-U1	438 Hot Water Heater Room	
0441-U1	441 Tool Room	
0445-U1	445 Spent-Fuel Pool Heat Exchanger Room	
0446-U1	446 Hallway	
0448-U1	448 SFPC Pump Room	
0449-U1	449 Demineralizer Room	
0450-U1	450 Valve Compartment	
0451-U1	451 Filter Room	
0453-U1	453 Clean Janitor	
0454-U1	454 Lobby	
0455-U1	455 Clean Toilet Room (Men's)	
0456-U1	456 Drying Area	
0461-U1	461 Dosimetry Lab	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0462-U1	462 Nonradioactive Vent Equipment Room	
0463-U1	463 Storage Room	
0464-U1	464 Storage Room	
0467-U1	467 SFP Heat Exchanger Room	
0478-U1	478 Motor Control Center Room	
0480-U1	480 Health Physics Briefing/Planning Room	
0481-U1	481 Health Physicist Room	
0482-U1	482 Air Sample & Smear Analysis Rm.	
0483-U1	483 Passage	
0484-U1	484 Hot Toilet (Women's)	
0485-U1	485 Hot Toilet (Men's)	
0486-U1	486 Survey Preparation Room	
0487-U1	487 Instrument Calibration Room	
0488-U1	488 Instrument Issue & Storage Rm.	
0489-U1	489 Waste & Decon. Foreman Office	
0490-U1	490 Clean Toilet (Women's)	
0491-U1	491 Passage	
0504-U1	504 Stair No. 6, El. 184'-0"	
0505-U1	505 Spent-Fuel Pool Vent Equipment Room	
0506-U1	506 Component Cooling Surge Tank Room	
0604-U1	604 Passage	
0605-U1	605 Blowdown Pumps and Surge Tank Room	
0606-U1	606 Filter Room	
0607-U1	607 Filter Room	
0608-U1	608 Blowdown Heat Exchanger Room	
0609-U1	609 Storage Room	
0610-U1	610 Valve Compartment Room	
CHASE-U1	CHASE	

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0140-U1 - 140 Waste Gas Decay Tank Drain Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0151-U1 - 151 Waste Gas Decay Tank Rooms

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-1	U1-4 Detection System 1A-102-1 Room 151	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-5	U1-4 Detection System 1A-102-5 Room 165	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-6	U1-4 Detection System 1A-102-6 Room 166	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-151/2151-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2151/151-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-101/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-102/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-107/165-90/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-108/166-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/201-4/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/254-4/12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/211-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/212-4/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-166/211-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-166/226-4/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-152/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-164/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-165/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-166/185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-164/165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>				
<b>Fire Zone ID:</b>	0151-U1 - 151 Waste Gas Decay Tank Rooms					

<b>System/Feature ID</b>	<b>Description</b>	<b>Ch.3</b>	<b>Ch.4</b>	<b>Reason(s)</b>	<b>Monitoring</b>	<b>HSS</b>
U1-FNP-W-167/166-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

<b>System/Feature ID</b>	<b>Ch.3</b>	<b>Ch.4</b>	<b>Reason(s)</b>	<b>Monitor</b>	<b>HSS</b>
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0152-U1 - 152 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-2	U1-4 Detection System 1A-102-2 Room 152	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-152/2152-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2152/152-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-104/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-105/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/CHASE (U1)-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-152/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-164/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-152/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-163/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-154A/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0152-U1 - 152 Valve Compartment Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0153-U1 - 153 Waste Gas Compressor Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-3	U1-4 Detection System 1A-102-3 Room 153	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-153/2153-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-152/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-153/154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-154A/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0154-U1 - 154 Waste Evaporator Steam Generator Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D109	Hose Station - N1V43D109-FZ 4 Room 163	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D110	Hose Station - N1V43D110-FZ 4 Room 161	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-5	U1-4 Detection System 1A-101-5 Room 177	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-11	U1-4 Detection System 1A-102-11 Room 154A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-4	U1-4 Detection System 1A-102-4 Room 154	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-118-1	U1-4 Detection System 1A-118-1 Room 160	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-118-2	U1-4 Detection System 1A-118-2 Room 161	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-25-1	U1-4 Detection System 1A-25-1 Room 161	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
1A-25-2	U1-4 Detection System 1A-25-2 Room 162	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-25-3	U1-4 Detection System 1A-25-3 Room 163	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-25-4	U1-4 Detection System 1A-25-4 Room 164	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0154-U1 - 154 Waste Evaporator Steam Generator Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' North East Corridor, Room 161	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
WS-1A-25-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' North West Corridor, Room 162	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
WS-1A-25-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' WDS Control Panel Room, Room 163	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
WS-1A-25-4	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Laundry & Hot Shw Tank Room, Room 164	-	Yes	-- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-154/2154-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-155/2155-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-105/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-106/164-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-111/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-140/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-155/255-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-163/213-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-163/214-4/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/212-4/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/213-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-177/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-153/154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-154A/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-155/156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-164/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0154-U1 - 154 Waste Evaporator Steam Generator Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-176/177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-154A/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-163/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-164/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-167/164-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-169/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-170/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-172/161-5/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-173/161-5/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-179/177-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-184/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-154/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-154A/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-163/168-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-154A/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-164/165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-183/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-01	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-02	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-169/163-1/4-100: 1-100-113-06	0:00, N. of 169	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/177-96/4-100: 1-100-114-03	0:00, S. of 177	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-155/2155-U1-4/U2-4-100 150	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 152	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 153	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-172/161-5/4-100 155	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0154-U1 - 154 Waste Evaporator Steam Generator Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-Elev 2/162-S02/4-100 Elev. No. 2 (2)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/162-S02/4-100 159	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-183/162-1/4-100 163	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/160-S08/4-100 154	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-155-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-161-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-162-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0154A-U1 - 154A Valve Compartment Room

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0155-U1 - 155 Passageway to Unit 2(1)	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0156-U1 - 156 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-1	U1-4 Detection System 1A-104-1 Room 156	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-156/2156-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2156/156-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-155/156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-156/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0157-U1 - 157 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-2	U1-4 Detection System 1A-104-2 Room 157	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2157/157-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-157/2157-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0157-U1 - 157 Holdup Tank Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0158-U1 - 158 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-3	U1-4 Detection System 1A-104-3 Room 158	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2158/158-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-158/2158-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0159-U1 - 159 Recycle Evaporator Feed Pump Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2159/159-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-159/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0160-U1 - 160 Hatch Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100	3:00, , U1 3 Unrated Barrier at ele 100 between Rooms 177/160 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100 181	0:00,	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0161-U1 - 161 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A41	Aux. Bldg-100'-North Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0162-U1 - 162 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A42	Aux. Bldg-100'-Near Waste Evap. Steam Gen.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0163-U1 - 163 WDS Control Panel Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A16	Aux. Bldg-100'-West End of Hallway	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0164-U1 - 164 Laundry and Hot Shower Tank Room/Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0165-U1 - 165 Waste Gas Decay Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0166-U1 - 166 Waste Gas Decay Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0168-U1 - 168 Chemical and Laundry Drain Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-25-5	U1-4 Detection System 1A-25-5 Room 168	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-25-5	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Chem & Laundry Dr Tank Room, Room 168	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-109/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-110/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-168/224-4/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-168/225-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-167/168-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-163/168-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-168/185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-169/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-169/168-1/4-100: 1-100-113-05	0:00, W. of 169	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0168-U1 - 168 Chemical and Laundry Drain Tank Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-168-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0170-U1 - 170 Letdown Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-2	U1-4 Detection System 1A-101-2 Room 170	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-111/170-1/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-170/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-170/216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-170/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-170/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-171/170-95/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-171/170-95/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0175-U1 - 175 Hallway	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-118-5	U1-4 Detection System 1A-118-5 Room 175	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-5	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Hallway to Boric Acid Room, Room 175	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-175/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-175/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-175/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/175-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-173/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-174/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-175/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-181/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-175/186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0175-U1 - 175 Hallway

Systems and Features

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0176-U1 - 176 Secondary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-176/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-176/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-176/177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-176/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0177-U1 - 177 Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100	3:00, , U1 3 Unrated Barrier at ele 100 between Rooms 177/160 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100 181	0:00,	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0178-U1 - 178 Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-6	U1-4 Detection System 1A-101-6 Room 178	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-178/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/178-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-179/178-96/4-100; 1-100-114-04	0:00, S. of 178	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0180-U1 - 180 Recycle Evaporator Steam Generator Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D131	Hose Station - N1V43D131-FZ 4 Room 186	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-11	U1-4 Detection System 1A-101-11 Room 187	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-101-7	U1-4 Detection System 1A-101-7 Room 180	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-118-7	U1-4 Detection System 1A-118-7 Room 186	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-7	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Boric Acid Area, Room 186	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-180/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-187/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-172/186-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-175/186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-176/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-179/187-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/CTMT-4/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-187/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-179/180-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0180-U1 - 180 Recycle Evaporator Steam Generator Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-179/187-96/4-100: 1-100-114-05	0:00, S. of 179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-179/180-96/4-100: 1-100-114-01	0:00, W. of 179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-179/180-96/4-100 184	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0186-U1 - 186 Boric Acid Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A40	Aux. Bldg-100'-Near Boric Acid Pump Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0187-U1 - 187 Hydro Test Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0188-U1 - 188 Boric Acid Tank Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-1	U1-4 Detection System 1A-103-1 Room 188	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-188/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-188/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-188/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-188/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-187/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-188/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-188/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0203-U1 - 203 Waste Condenser Tanks and Pump Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D104	Hose Station - N1V43D104-FZ 4 Room 209	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D127	Hose Station - N1V43D127-FZ 4 Room 209	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D128	Hose Station - N1V43D128-FZ 4 Room 208	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D132	Hose Station - N1V43D132-FZ 4 Room 237	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-2	U1-4 Detection System 1A-103-2 Room 218	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
1A-103-7	U1-4 Detection System 1A-103-7 Room 237	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-104-4	U1-4 Detection System 1A-104-4 Room 203	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-104-9	U1-4 Detection System 1A-104-9 Room 253	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
1A-35-1	U1-4 Detection System 1A-35-1 Room 205	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-2	U1-4 Detection System 1A-35-2 Room 207	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-3	U1-4 Detection System 1A-35-3 Room 208	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-4	U1-4 Detection System 1A-35-4 Room 209	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-5	U1-4 Detection System 1A-35-5 Room 222	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0203-U1 - 203 Waste Condenser Tanks and Pump Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-130-1	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 121' System East Operator Work Station West Pipe System, Room 207	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
WS-1A-35-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 121' Corridor, Room 208	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
WS-1A-35-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 121' Corridor, Room 209	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-35-4	Preaction Sprinkler System, U1-4, Aux Building Elevation 121' Corridor, Room 222	-	Yes	-- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-203/2203-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2205/205-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-140/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-170/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-173/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-174/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-175/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-175/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-176/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-178/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-203/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-205/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/175-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/317-34/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-209/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0203-U1 - 203 Waste Condenser Tanks and Pump Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-209/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-222/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-237/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-203/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-204/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/601-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-208/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-214/209-4/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-217/218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-222/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-223/222-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-237/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-245/209-20/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/203-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-253/2253-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-206/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-218/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-237/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/208-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-156/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-188/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-203/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0203-U1 - 203 Waste Condenser Tanks and Pump Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-208/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-237/CTMT-4/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/208-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2205/205-U2-4/U1-4-121 202	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121 203	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-121 329A	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/209-S02/4-121 212	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-216/209-4/4-121 232	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U1-FNP-N-Elev 2/209-S02/4-121 Elev. No. 2 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/208-S08/4-121 205	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-205-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-207-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-208-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0204-U1 - 204 Waste Evaporator Package Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-5	U1-4 Detection System 1A-104-5 Room 204	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-204/2204-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-204/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-203/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-204/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0205-U1 - 205 Passageway to Unit 2	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

—

Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0206-U1 - 206 Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-6	U1-4 Detection System 1A-104-6 Room 206	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2206/206-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-159/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-206/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0207-U1 - 207 Hatch Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0208-U1 - 208 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A37	Aux. Bldg-121'-North Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-605/208-4/4-121	3:00, , U1 3 Unrated Barrier at ele 121 between Rooms 605/208 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0209-U1 - 209 Hallway

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A38	Aux. Bldg-121'-Near Recycle Evap. Cont. Panel	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0215-U1 - 215 Duct and Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-162/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-215/402-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-215/STAIR 2-4/S02-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/214-4/17-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-01	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-02	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/317-4/34-139: 1-139-118-08	0:00, S. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-STAIR 2/215-S02/4-155 411	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0215-U1 - 215 Duct and Pipe Chase	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0216-U1 - 216 Valve Compartments Area	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-8	U1-4 Detection System 1A-103-8 Room 216	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-170/216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-216/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-216/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-216/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-216/209-4/4-121 232	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0217-U1 - 217 Volume Control Tank Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-170/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-171/217-95/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-217/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-216/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-217/218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-217/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0218-U1 - 218 Chiller Unit Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0219-U1 - 219 Pipe Chase

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-219/602-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/219-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0220-U1 - 220 Valve Compartment Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-3	U1-4 Detection System 1A-103-3 Room 220	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-177/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-221/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-220/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-220/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0221-U1 - 221 Primary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-176/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-221/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-221/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-221/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-221/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-208/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-221/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-220/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0222-U1 - 222 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A39	Aux. Bldg-121'-Near RE-18	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0230-U1 - 230 Recycle Evaporator Package Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-4	U1-4 Detection System 1A-103-4 Room 230	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-175/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-180/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-222/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-221/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0231-U1 - 231 Sluice Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-5	U1-4 Detection System 1A-103-5 Room 231	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-179/231-96/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-231/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-231/604-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-231/605-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-220/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-231/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-208/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0232-U1 - 232 Sluice Filter Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-6	U1-4 Detection System 1A-103-6 Room 232	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-187/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-232/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-188/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-231/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0236-U1 - 236 Duct Chase

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-131/CHASE-1/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/236-6/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-CHASE (U1)/236-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-250/236-31/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-236/241-4/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-223/236-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-03	0:00, F. of 236	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-04	0:00, F. of 236	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-05	0:00, F. of 236	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/346-4/41-139: 1-139-119-16	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-07	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-08	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-18	0:00, S. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-19	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-13	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-14	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-15	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0236-U1 - 236 Duct Chase	

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0237-U1 - 237 Corridor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0238-U1 - 238 Cask Storage Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-1	U1-4 Detection System 1A-107-1 Room 238	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-16	U1-4 Detection System 1A-107-16 Room 239	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-2	U1-4 Detection System 1A-107-2 Room 240	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-3	U1-4 Detection System 1A-107-3 Room 348	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-237/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-238/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-188/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0238-U1 - 238 Cask Storage Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-238/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-447/348-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-448/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-450/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-238/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-349/348-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-240/459-4/39-155: 1-155-106-01	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-02	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-03	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-04	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-447/348-98/4-155 434	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0239-U1 - 239 Transfer Canal	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0240-U1 - 240 Spent-Fuel Pool Room

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0253-U1 - 253 Valve Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0301-U1 - 301 Seal Water Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-1	U1-4 Detection System 1A-105-1 Room 301	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-10	U1-4 Detection System 1A-105-10 Room 313	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-11	U1-4 Detection System 1A-105-11 Room 314	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-12	U1-4 Detection System 1A-105-12 Room 315	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-2	U1-4 Detection System 1A-105-2 Room 303	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-3	U1-4 Detection System 1A-105-3 Room 304	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-4	U1-4 Detection System 1A-105-4 Room 305	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-8	U1-4 Detection System 1A-105-8 Room 311	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
 Fire Zone ID: 0301-U1 - 301 Seal Water Filter Room

Systems and Features

### Active Fire Protection - Suppression

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-302/2302-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-303/2303-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-304/2304-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-305/2305-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2301/301-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-301/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-302/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-303/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-304/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-305/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-311/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-313/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-314/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-315/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-305/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-307/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-311/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-301/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-315/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0301-U1 - 301 Seal Water Filter Room	

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0302-U1 - 302 Recycle Evaporator Feed Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0303-U1 - 303 Reactor Coolant Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0304-U1 - 304 Waste Monitor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0305-U1 - 305 Seal Injection Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0306-U1 - 306 Recycle Evaporator Feed Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-306/2306-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-306/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-305/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-306/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-306/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0307-U1 - 307 Valve Compartment Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D111	Hose Station - N1V43D111-FZ 4 Room 316	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D113	Hose Station - N1V43D113-FZ 4 Room 332	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D114	Hose Station - N1V43D114-FZ 4 Room 312	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-5	U1-4 Detection System 1A-105-5 Room 307	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-6	U1-4 Detection System 1A-105-6 Room 309	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-7	U1-4 Detection System 1A-105-7 Room 310	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-9	U1-4 Detection System 1A-105-9 Room 312	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-1	U1-4 Detection System 1A-48-1 Room 309	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
1A-48-10	U1-4 Detection System 1A-48-10 Room 351	-	Yes		Yes	-
1A-48-2	U1-4 Detection System 1A-48-2 Room 312	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-4	U1-4 Detection System 1A-48-4 Room 322	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-5	U1-4 Detection System 1A-48-5 Room 330	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-7	U1-4 Detection System 1A-48-7 Room 332	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0307-U1 - 307 Valve Compartment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-9	U1-4 Detection System 1A-48-9 Room 316	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-49-3	U1-4 Detection System 1A-49-3 Room 325	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-48-1	Preaction Sprinkler System, U1-4, Aux Building Elevation 139' North Corridor, Room 312	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-48-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 139' Passageway to Unit 2, Room 316	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-48-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 139' Hallway, Room 322	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-188/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-205/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-221/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-221/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-222/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-237/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-309/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-310/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-312/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-312/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0307-U1 - 307 Valve Compartment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-316/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-322/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-325/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-327/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-330/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-332/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-332/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-351/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-307/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-308/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/601-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-312/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-322/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-324/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-325/326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-326/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-327/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-330/609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-332/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-347/332-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-351/605-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/316-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-322/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-326/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-326/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-351/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-306/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-308/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-309/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-311/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-322/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-325/347-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-330/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-331/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-301/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-315/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-316/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0307-U1 - 307 Valve Compartment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-330/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-351/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-322/317-4/34-139: 1-139-118-17	0:00, N. of 322	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-316/317-4/34-139: 1-139-118-12	0:00, E. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139 302	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 304	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-312/Stair 8-4/S08-139 305	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-322/317-4/34-139 311	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-Elev 2/322-S02/4-139 Elev. No. 2 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/322-S02/4-139 316	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-309-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-316-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-322-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0308-U1 - 308 Waste Condensate and Monitor Tank Demineralizer Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-308/2308-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-306/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-308/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-308/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0309-U1 - 309 Hatch Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0310-U1 - 310 Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0311-U1 - 311 Recycle Evaporator Concentrates Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0312-U1 - 312 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A36	Aux. Bldg-139'-North Corridor-West End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0313-U1 - 313 Floor Drain and Laundry Tank Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0314-U1 - 314 Waste Evaporator Feed Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0315-U1 - 315 Recycle Waste Condenser Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0316-U1 - 316 Passageway to Unit 2	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0322-U1 - 322 Hallway

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0323-U1 - 323 Sample Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-49-1	U1-4 Detection System 1A-49-1 Room 323	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-209/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-323/409-4/4-155	0:00, marshmallows,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-323/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-322/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-323/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-323/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0324-U1 - 324 Primary Chemistry Lab	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A12	Aux. Bldg-139'-Primary chemistry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A14	Aux. Bldg-139'-Primary Chemistry lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-49-2	U1-4 Detection System 1A-49-2 Room 324	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-209/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-216/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-217/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-323/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-324/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-333/324-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0324-U1 - 324 Primary Chemistry Lab	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0325-U1 - 325 Counting Room/Spectro-photometer Lab

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0326-U1 - 326 Radiochemistry Lab	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A13	Aux. Bldg-139'-Radio-Chemistry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-49-4	U1-4 Detection System 1A-49-4 Room 326	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-326/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-325/326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-326/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-326/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-326/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-326/347-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0327-U1 - 327 Valve Access Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0328-U1 - 328 BTR Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-328/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-328/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-328/602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-328/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-328/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-328/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0329-U1 - 329 Pipe Tunnel	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-20	U1-4 Detection System 1A-105-20 Room 329	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-15	U1-4 Detection System 1A-107-15 Room 329	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-329/422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-329/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-605/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-610/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/329-S10/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-603/329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0330-U1 - 330 Chiller Surge Tanks Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-330/605-4/4-139	1:00, , U1 Unrated Barrier at ele 139 between Rooms 330/605 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0331-U1 - 331 Valve Access Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-6	U1-4 Detection System 1A-48-6 Room 331	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-188/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-231/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-331/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/331-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-331/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-328/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-331/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-330/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-331/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-602/331-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0332-U1 - 332 MCC 1A/2A Area

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A11	Aux. Bldg-139'-Sample Room (outside)	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A35	Aux. Bldg-139'-East Corridor near MCC	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0340-U1 - 340 Demineralizer Compartment

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-221/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-340/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-331/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0341-U1 - 341 Pipe Chase	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-341/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0342-U1 - 342 Spent-Fuel Pool Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-8	U1-4 Detection System 1A-48-8 Room 342	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-188/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-332/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-238/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-330/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0348-U1 - 348 Cask Wash Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

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Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0351-U1 - Chiller Surge Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0400-U1 - Primary Access Point	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-1	U1-4 Detection System 1A-114-1 Room 400	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-400/415-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-465/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-466/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-400/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/400-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-465/400-13/4-155 456	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/400-4/4-155 419	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID		Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-400-Plant staff Training		-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions		-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0402-U1 - 402 Passage to Unit 2	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-3	U1-4 Detection System 1A-114-3 Room 402	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-114-5	U1-4 Detection System 1A-114-5 Room 417	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-1	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Passageway to Unit 2, Room 402	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-114-4	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Corridor, Room 417	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-317/402-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-318/417-40/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-417/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/402-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-415/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-417/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-402/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-417/416-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0402-U1 - 402 Passage to Unit 2	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155 401	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0403-U1 - 403 Hot Instrument Shop	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-1	U1-4 Detection System 1A-57-1 Room 403	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-403/2403-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-316/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-317/403-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0405-U1 - 405 Hatch Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A32	Aux. Bldg-155'-North Corridor-East End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D105	Hose Station - N1V43D105-FZ 4 Room 446	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-10	U1-4 Detection System 1A-107-10 Room 446	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-7	U1-4 Detection System 1A-107-7 Room 422	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-8	U1-4 Detection System 1A-107-8 Room 423	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-57-2	U1-4 Detection System 1A-57-2 Room 405	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-57-6	U1-4 Detection System 1A-57-6 Room 419	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-405/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-306/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-312/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-327/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-329/422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-329/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-332/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-422/467-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0405-U1 - 405 Hatch Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-404/405-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-405/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-418/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-419/420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-421/422-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-423/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-445/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-447/446-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-467/422-4/4-165	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-405/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/405-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-427/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-446/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-467/446-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-427/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/419-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-404/405-97/4-155: 1-155-122-06	0:00, E. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-404/405-97/4-155: 1-155-122-07	0:00, E. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-447/446-98/4-155: 1-155-132-02	0:00, E. of 447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-467/422-4/4-165: 1-155-131-04	0:00, E. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-421/422-92/4-155 461	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/405-4/4-155 409	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-STAIR 8/405-S08/4-155 407	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-446/459-4/39-155 432	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/422-S10/4-155 431	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0405-U1 - 405 Hatch Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0406-U1 - 406 Decontamination Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-136-1	U1-4 Detection System 1A-136-1 Room 406	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-136-1	Preaction Sprinkler System, U1-4, Decon Room, Room 406	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-2406/406-U2-4/U1-4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-406/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-601/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-602/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-406/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2602/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-01	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-02	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0406-U1 - 406 Decontamination Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-406/2405-U1-4/U2-4-155 2403	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-406-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0407-U1 - 407 Hot Machine Shop	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A54	Aux.Bldg.-155'-Hot Machine Shop	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A6	Aux. Bldg-155'-Hot Machine Shop	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-4	U1-4 Detection System 1A-107-4 Room 407	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-407/2408-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-603/407-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-405/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-407/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-407/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2603/407-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-407/2408-U1-4/U2-4-155 2404	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155 2406	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0407-U1 - 407 Hot Machine Shop	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-407-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0408-U1 - 408 Hallway	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
Hose Cabinet at Containment Entrance	High level system descriptor is superseded by zone-level descriptor. See zone-level descriptor.	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D122	Hose Station - N1V43D122-FZ 4 Room 409	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D123	Hose Station - N1V43D123-FZ 4 Room 408	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-5	U1-4 Detection System 1A-107-5 Room 408	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-57-3	U1-4 Detection System 1A-57-3 Room 409	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-312/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-322/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-323/409-4/4-155	0:00, marshmallows,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-328/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/409-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-602/408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-603/408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-408/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/408-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0408-U1 - 408 Hallway	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-421/408-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-467/408-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-406/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-407/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-01-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-02-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-01-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-02-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155: 1-155-122-04	0:00, S. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155: 1-155-122-05	0:00, S. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-01	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-02	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-03	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-Elev 2/409-S02/4-155 Elev. No. 2 (5)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155 408	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155 466	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-409-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0409-U1 - 409 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0410A-U1 - 410A 600-V Load Center	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A2	Aux. Bldg-155'-Load Center 1N	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-4	U1-4 Detection System 1A-57-4 Room 410A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-50-1	Local CO2 system in Fire Area 4 , room number 410A, 600V Load Center 1M	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-317/410A-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0410B-U1 - 410B 600-V Load Center	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-5	U1-4 Detection System 1A-57-5 Room 410B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-50-2	Local CO2 system in Fire Area 4 , room number 410B, 600V Load Center 1N	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-317/410B-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0415-U1 - 415 Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0417-U1 - 417 Corridor

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0418-U1 - 418 Auxiliary Building and Containment Purge Vent Equipment Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-6	U1-4 Detection System 1A-107-6 Room 418	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-114-4	U1-4 Detection System 1A-114-4 Room 415	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Corridor, Room 415	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-324/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-325/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-326/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/418-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/415-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-400/415-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-418/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-418/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-415/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-418/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/432-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0418-U1 - 418 Auxiliary Building and Containment Purge Vent Equipment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-415/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-416/415-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-418/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-415/400-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-347/418-35/4-155: 1-139-120-15	0:00, F. of 418	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-418/405-4/4-155 409	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-416/415-4/44-155 418	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/400-4/4-155 419	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155 466	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0419-U1 - 419 Demineralizer Hatch Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0422-U1 - 422 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0423-U1 - 423 Valve Compartment	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0424-U1 - 424 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0425-U1 - 425 Demineralizer Compartment

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0426-U1 - 426 Demineralizer Compartment

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0427-U1 - 427 Demineralizer Compartment

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-427/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-427/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0429-U1 - 429 Containment Purge Air Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A30	Aux. Bldg-155'-Radwaste Vent. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-1	U1-4 Detection System 1A-108-1 Room 429	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-323/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/429-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-417/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-429/241-4/6-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-429/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/438-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0429-U1 - 429 Containment Purge Air Equipment Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-334/429-34/4-155: 1-139-119-20	0:00, F. of 429	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-429/CTMT-4/55-155 467	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/429-S02/4-155 447	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-429-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0432-U1 - 432 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A25	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D121	Hose Station - N1V43D121-FZ 4 Room 432	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-6	U1-4 Detection System 1A-114-6 Room 432	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-5	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Corridor, Room 432	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-465/432-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/432-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/454-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-432/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0432-U1 - 432 Corridor	

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0438-U1 - 438 Hot Water Heater Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-2	U1-4 Detection System 1A-108-2 Room 438	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-1	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' HP Office & Briefing Room Non-Rad, Room 438	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-438/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-438/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/438-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-438/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0438-U1 - 438 Hot Water Heater Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0441-U1 - 441 Tool Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-7	U1-4 Detection System 1A-57-7 Room 441	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-441/2406-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-309/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-310/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-405/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/441-97/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-441/2406-U1-4/U2-4-155 402	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-441-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0445-U1 - 445 Spent-Fuel Pool Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-17	U1-4 Detection System 1A-107-17 Room 448	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-9	U1-4 Detection System 1A-107-9 Room 445	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-342/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-445/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-447/445-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-449/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-450/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-420/445-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-421/445-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-448/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-445/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-447/448-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-448/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-447/448-98/4-155: 1-155-132-01	0:00, W. of 447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0445-U1 - 445 Spent-Fuel Pool Heat Exchanger Room	

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0446-U1 - 446 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A33	Aux. Bldg-155'-New Fuel Storage Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0448-U1 - 448 SFPC Pump Room

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0449-U1 - 449 Demineralizer Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-342/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-449/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-450/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-450/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-448/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-450/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0450-U1 - 450 Valve Compartment

### Systems and Features

#### Extinguishers

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#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0451-U1 - 451 Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-342/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-238/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-450/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-451/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0453-U1 - 453 Clean Janitor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-3	U1-4 Detection System 1A-108-3 Room 453	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-2	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Clean Janitor, Room 453	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/453-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-453/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building  
Fire Zone ID: 0453-U1 - 453 Clean Janitor

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0454-U1 - 454 Lobby

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-1	Aux. Bldg- 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-2	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-3	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-4	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-5	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-6	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-7	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-8	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-9	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-7	U1-4 Detection System 1A-114-7 Room 454	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0454-U1 - 454 Lobby	

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-6	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Lobby, Room 454	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-345/454-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/454-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-454/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-454/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/454-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/454-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/454-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-Elev 1/454-S01/4-155 Elev. No. 1 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/454-S01/4-155 439	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-454-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0455-U1 - 455 Clean Toilet Room (Men's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0456-U1 - 456 Drying Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-5	U1-4 Detection System 1A-108-5 Room 456	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-4	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Drying Area, Room 456	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/456-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-455/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-456/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-488/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0456-U1 - 456 Drying Area	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0461-U1 - 461 Dosimetry Lab	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-1	U1-4 Detection System 1A-51-1 Room 461	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52A-1	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' HP Office & Briefing Room Non-Rad, Room 461	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-52B-5	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Dosimetry Lab, Room 461	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-249/461-30/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-250/461-31/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/461-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-454/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/461-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-455/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-456/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-461/462-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-491/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0461-U1 - 461 Dosimetry Lab	

Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0462-U1 - 462 Nonradioactive Vent Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A45	Aux. Bldg-155'-Non-Rad Vent. Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D106	Hose Station - N1V43D106-FZ 4 Room 462	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-2	U1-4 Detection System 1A-51-2 Room 462	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-51-1	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Environmental Low Activity Lab & Non-Radioactive Vent Rooms, Room 462	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/462-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-462/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-461/462-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/463-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/462-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/462-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-462/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0462-U1 - 462 Nonradioactive Vent Equipment Room

**Systems and Features**

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0463-U1 - 463 Storage Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-3	U1-4 Detection System 1A-51-3 Room 463	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/463-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-463/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/463-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-463/OUTSIDE-4/YARD-155 443	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0464-U1 - 464 Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A5	Aux. Bldg-155'-N2 Storage Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-4	U1-4 Detection System 1A-51-4 Room 464	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-463/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-464/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-464/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-464/OUTSIDE-4/YARD-155 442	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0467-U1 - 467 SFP Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-13	U1-4 Detection System 1A-107-13 Room 467	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-422/467-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/467-S10/4-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-467/422-4/4-165	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-467/408-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-467/446-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-467/421-4/92-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-467/422-4/4-165: 1-155-131-04	0:00, E. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-467/421-4/92-165: 1-155-131-03	0:00, W. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0478-U1 - 478 Motor Control Center Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-14	U1-4 Detection System 1A-107-14 Room 478	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-332/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/478-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-418/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-488/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-438/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-238/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-420/478-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-445/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-451/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0478-U1 - 478 Motor Control Center Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0480-U1 - 480 Health Physics Briefing/Planning Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-6	U1-4 Detection System 1A-108-6 Room 480	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-6	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Health Physics Briefing/Planning Room, Room 480	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/480-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-480/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-480/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0480-U1 - 480 Health Physics Briefing/Planning Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0481-U1 - 481 Health Physicist Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-7	U1-4 Detection System 1A-108-7 Room 481	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-7	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Health Physicist Room, Room 481	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/481-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-480/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-481/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-481/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0481-U1 - 481 Health Physicist Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0482-U1 - 482 Air Sample & Smear Analysis Rm.	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-8	U1-4 Detection System 1A-108-8 Room 482	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-8	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Air Sample & Smear Analysis Rm., Room 482	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/482-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-481/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0482-U1 - 482 Air Sample & Smear Analysis Rm.

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0483-U1 - 483 Passage	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-9	U1-4 Detection System 1A-108-9 Room 483	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-9	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Passage, Room 483	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/483-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-480/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-481/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-438/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0483-U1 - 483 Passage	

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0484-U1 - 484 Hot Toilet (Women's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-10	U1-4 Detection System 1A-108-10 Room 484	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-10	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Hot Toilet (Women's), Room 484	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-484/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0484-U1 - 484 Hot Toilet (Women's)

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0485-U1 - 485 Hot Toilet (Men's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-11	U1-4 Detection System 1A-108-11 Room 485	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-11	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Hot Toilet (Men's), Room 485	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-438/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-484/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0485-U1 - 485 Hot Toilet (Men's)	

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0486-U1 - 486 Survey Preparation Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-12	U1-4 Detection System 1A-108-12 Room 486	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-108-4	U1-4 Detection System 1A-108-4 Room 455	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-12	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' (Survey Preparation Room), Room 486	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-52B-3	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Clean Toilet Room (Men's), Room 455	-	Yes	-- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/455-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/486-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-453/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-455/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-486/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-491/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-455/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-486/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-455/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0486-U1 - 486 Survey Preparation Room	

Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0487-U1 - 487 Instrument Calibration Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-13	U1-4 Detection System 1A-108-13 Room 487	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-13	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Instrument Calibration Room, Room 487	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/487-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-486/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-487/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0487-U1 - 487 Instrument Calibration Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0488-U1 - 488 Instrument Issue & Storage Rm.	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-14	U1-4 Detection System 1A-108-14 Room 488	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-14	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Instrument Issue & Storage Rm., Room 488	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/488-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-487/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-488/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-488/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0488-U1 - 488 Instrument Issue & Storage Rm.

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0489-U1 - 489 Waste & Decon. Foreman Office	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-15	U1-4 Detection System 1A-108-15 Room 489	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-15	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Waste & Decon. Foreman Office, Room 489	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-345/489-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/489-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-454/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-486/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Fire Zone ID:** 0489-U1 - 489 Waste & Decon. Foreman Office

**Systems and Features**

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0490-U1 - 490 Clean Toilet (Women's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-16	U1-4 Detection System 1A-108-16 Room 490	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-16	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Clean Toilet (Women's), Room 490	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/490-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-490/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-455/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0490-U1 - 490 Clean Toilet (Women's)	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0491-U1 - 491 Passage	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-18	U1-4 Detection System 1A-108-18 Room 491	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-114-2	U1-4 Detection System 1A-114-2 Room 491	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-17	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Passage, Room 491	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-491/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-490/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-491/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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Fire Safety Analysis

Fire Area ID:	1-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	0491-U1 - 491 Passage	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0504-U1 - 504 Stair No. 6, El. 184'-0"	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A7	Aux. Bldg-184'-SFP Monorail Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-109-1	U1-4 Detection System 1A-109-1 Room 504	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0505-U1 - 505 Spent-Fuel Pool Vent Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A46	Aux. Bldg-184'-SFP Vent Equip. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A47	Aux. Bldg-184'-SFP Vent Equip. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D100	Hose Station - N1V43D100-FZ 4 Room 505	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-109-2	U1-4 Detection System 1A-109-2 Room 505	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0506-U1 - 506 Component Cooling Surge Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-110-2	U1-4 Detection System 1A-110-2 Room 506	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0604-U1 - 604 Passage	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-13	U1-4 Detection System 1A-105-13 Room 604	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-231/604-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/604-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/604-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-603/604-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/606-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-STAIR 10/604-S10/4-131 333	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/604-93/4-131 329	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-604-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0605-U1 - 605 Blowdown Pumps and Surge Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-14	U1-4 Detection System 1A-105-14 Room 605	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-605/421-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-231/605-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-330/605-4/4-139	1:00, , U1 Unrated Barrier at ele 139 between Rooms 330/605 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-351/605-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-605/329-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-605/609-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-605/208-4/4-121	3:00, , U1 3 Unrated Barrier at ele 121 between Rooms 605/208 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 10/605-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0606-U1 - 606 Filter Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-15	U1-4 Detection System 1A-105-15 Room 606	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-606/607-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-606/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/606-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-606/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-606/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0607-U1 - 607 Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-16	U1-4 Detection System 1A-105-16 Room 607	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-606/607-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-607/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-607/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0608-U1 - 608 Blowdown Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-17	U1-4 Detection System 1A-105-17 Room 608	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-341/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-606/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-607/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-608/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-STAIR 10/608-S10/4-131 334	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0609-U1 - 609 Storage Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-18	U1-4 Detection System 1A-105-18 Room 609	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-609/421-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-232/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-330/609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-605/609-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-609/Stair 10-4/S10-131 335	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0610-U1 - 610 Valve Compartment Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-19	U1-4 Detection System 1A-105-19 Room 610	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-606/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-607/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-610/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-610/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	CHASE-U1 - CHASE	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-152/CHASE (U1)-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-CHASE (U1)/236-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE (U1)/184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV block valve and Train B PORV block valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Performance based approach ensure adequate shutdown margin.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 2/CH 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2.4.RCS Temperature - RCS Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1B pressure is monitored in the Control Room.6.SG Level - Steam Generator 1B/1C level is monitored in the Control Room.	
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b> 1-004-U1 - Aux Building <b>Compliance Basis:</b> NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		<b>Engineering Evaluations</b>
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 7, TE-BE-03-9898-001, Technical Evaluation in Support of GL 86-10 for DCP 03-1-9898, Reroute Appendix R RWST Suction Valve Cables	
<b>Inactive</b>	Yes	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	Purpose:  The purpose of the evaluation is to assess the adequacy of the separation for redundant trains of the RWST suction valves. The valves are not separated in accordance with the requirements of Appendix R, Section III.G.2 in that the area of spatial separation is not provided with whole area suppression.  Bases for Acceptability:  The acceptability of the evaluation is based on spatial separation, location of combustibles, limited in situ combustibles, whole area detection with partial suppression, and fire barriers. In addition, administrative controls have been established to maintain the non-suppressed area free of transient combustibles or to establish compensatory actions.	
<b>Engineering Evaluation ID</b>	ENGDOC, DOEJ-SM-03-0415-001 Applicability of NFPA 80 Door Closer Requirements	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	Purpose:  This evaluation addresses a select number of fire doors that occasionally may not automatically latch closed due to "abnormal air pressure".  Bases for Acceptability:  The specific fire doors cited are PA101, 201 and 497. The evaluation justifies the door latching deviation by taking credit for plant staff that ensure all fire doors are closed after entry or egress.	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	Purpose:  This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.  Bases for Acceptability:	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the two code editions
- The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

non-compliances identified in the evaluations

- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of</li> </ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

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- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have been provided with justifications

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable & combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), Enclosure of one train of redundant cable by a 1 hr rated barrier with automatic suppression (III.G.2.c criteria) and separation by 3 hr barrier (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression and lack of separation of redundant trains by 3 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For redundant electrical power distribution system:</p> <ul style="list-style-type: none"> <li>• The redundant MCCs 1A and 1B are separated by a 2-ft-thick reinforced concrete floor at el 139 ft - 0 in.</li> <li>• Unsealed penetrations have been reviewed and will not affect separation.</li> <li>• Minimum horizontal separation between components is approximately 60 feet with complete automatic suppression coverage at el 121 ft - 0 in.</li> <li>• The redundant dc distribution panels 1C and 1F are separated by a 2-ft-thick reinforced concrete floor at el 139 ft.</li> <li>• The minimum horizontal separation between these redundant panels is approximately 40 ft and has complete automatic suppression coverage at el 121 ft - 0 in. and 139 ft - 0 in.</li> <li>• A smoke detection system is installed in all rooms containing the subject equipment.</li> <li>• Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on the subject elevations.</li> </ul> <p>For steam generator pressure instrumentation:</p> <ul style="list-style-type: none"> <li>• A fire rated barrier has been provided in room 462 for raceways 21E047, 21E048, 31E017, 41E019 and 41E017.</li> <li>• A fire rated barrier inside the following conduits is provided where they attach to pull boxes located in room 462 -21E045, 21E047, 31E018, 31E020, 41E017, and 41E019.</li> <li>• Partial suppression system covers the area of modification In the east portion of room 462.</li> <li>• Unsealed penetrations in the subject wall have been reviewed.</li> <li>• Approximate 32-ft horizontal separation between redundant steam generator pressure instruments and cabling.</li> <li>• Smoke detection system in rooms</li> <li>• Automatic fixed suppression system and the barriers provided for redundant cabling in room 462 would protect the redundant S/G B and C instrumentation.</li> <li>• A portable extinguisher and manual hose station are available for use in room 464.</li> <li>• Based upon the modification, the existing raceway barriers, smoke detection, and fixed suppression in the area, a credible fire in room 462 would not affect the ability to monitor S/G A pressure.</li> <li>• Control room actions can be performed for resetting spurious SI, CVI, or CI safety signals.</li> </ul> <p>For instrument air:</p> <ul style="list-style-type: none"> <li>• Redundant cables are separated by a 2-ft-thick reinforced concrete floor at el 121 ft - 0 in. and 139 ft - 0 in.</li> <li>• Unsealed penetrations in the subject floors have been reviewed and will not affect the separation afforded by the concrete floor.</li> <li>• Train A cables have full suppression coverage on el 100 ft - 0 in. and el 139 ft - 0 in.</li> <li>• Train B cables have full suppression coverage on el 121 ft - 0 in.</li> <li>• Smoke detection system is installed in all rooms containing the subject cabling.</li> <li>• Manual hose stations and portable extinguishers are available for use on the subject elevations.</li> </ul> <p>For battery room ventilation:</p> <ul style="list-style-type: none"> <li>• The requirement for battery and battery charger room ventilation is a long term requirement.</li> <li>• Either portable ventilation equipment will be installed in the effected room(s) or</li> <li>• The damaged ventilation system will be repaired within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Previously Approved Engineering Evaluations

exceed acceptable limits.

For boration/makeup, depressurization, and RCP seal integrity:

- A fire rated barrier has been provided for train-A power cable raceway ADDA21, ADDA18, ADDA15, and ADDA09.
- The existing fire rated barrier on raceway BFDB03 has been extended and a fire rated barrier for raceway BHFA03 is being provided
- An open penetration in floor slab has been sealed.
- Suppression coverage is provided in rooms 163, 162, 161, 160, 175, and 186.
- Redundant power cables are separated by a 2-ft-thick reinforced concrete wall bounding rooms with the exception of room 155, where there is approximately 32 ft of separation.
- Unsealed penetrations have been reviewed and the walls afford adequate separation.
- A smoke detection system is installed in all rooms containing the subject charging pump cabling.
- Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on this elevation.
- EI 100 ft - 0 in. Train-B cables are protected by a fire rated barrier which extends to a point of 40-ft horizontal separation from the redundant train-A cables.
- Automatic fired suppression and smoke detection systems provide coverage for the subject cables.
- EI 121 ft - 0 in. redundant cables have a minimum horizontal separation of approximately 40 ft.
- The train-B power and control cables are provided with automatic suppression and smoke detection coverage
- Redundant train-A and -B charging pump room cooler power and control cables are separated by a 2-ft-thick reinforced concrete slab floor at el 121 ft - 0 in.
- Unsealed penetrations in the floor slab have been reviewed and are considered to afford adequate separation.

For main steam isolation:

- Manual action can be performed to manually trip the TDAFW pump throttle valve Q1N12MOV3406-A.

For steam release (cooldown):

- Manual action can be performed to open or close the atmospheric relief valves.

For neutron flux monitoring:

- Configuration of redundant equipment cables and equipment with respect to barriers would limit the fire to one train of equipment.
- Unsealed penetrations in the subject floor slab have been reviewed and are considered not to affect the separation afforded by the concrete floor.

For reactor coolant boundary integrity:

- Manual action can be performed to remove power from all cables in the shared raceway. This can be accomplished by opening the supply breaker on 125 V-dc switchgear 1A (Q1R42B001A-A) for 125 V-dc distribution panel 1C (Q1R41L001C-A).

For the lack of full area smoke/fire detection:

- All cabling in rooms without detection is routed in conduits.
- There are no combustibles in these rooms.
- There are no functionally redundant safe shutdown cables in these rooms.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-1-9941, DCP 03-1-9926, DCP 03-1-9928, DCP 03-1-9898, and DCP 03-1-9902. Note that raceway 31E020 with Kaowool raceway fire barrier is not addressed in the Kaowool elimination resolution table.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

Fire Area ID: 1-004-U1 - Aux Building Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For the non-fire rated hatch covers:</p> <ul style="list-style-type: none"><li>• Suppression system in room 163 in the area of the subject steel hatch cover</li><li>• Analysis of safe shutdown showed that physical separation was adequate</li><li>• Detection system provided in rooms 163 and 103</li><li>• Sprinkler systems in room 345 and 454 will serve the purpose of a water curtain to prevent the passage of fire through the non-rated steel hatch.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li><li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li><li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

### Licensing Basis

Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to seal MCCs 1A (Q1R17B0001) and 1B (Q1R17B0002) and replace trip device in panel Q1R42B0001A, breakers LA08, LA13, LA20; Q1R42B0001B, breakers LB07, LB14.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0140-U1	140 Waste Gas Decay Tank Drain Filter Room	—	—	—	—
0151-U1	151 Waste Gas Decay Tank Rooms	—	E, R, S, N	R, B	<p>Detection System, 1A-102-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-102-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-102-6:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-151/2151-U1-4/U2-4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2151/151-U2-4/U1-4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-101/151-1/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-102/151-1/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-103/151-1/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-107/165-90/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-108/166-1/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/201-4/14-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/202-4/15-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/254-4/12-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-165/210-4/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-165/211-4/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-165/212-4/16-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-166/211-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-166/226-4/19-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-152/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-164/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-165/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-166/185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-151/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-164/165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-165/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-166/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-167/166-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0152-U1	152 Valve Compartment Room	—	E, R, S, N	R, B	Detection System, 1A-102-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-152/2152-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2152/152-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-103/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-104/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-105/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/CHASE (U1)-4/51-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0153-U1	153 Waste Gas Compressor Room	—	E, R, S, N	R, B	<p>FireBarrier, U1-FNP-E-152/153-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-164/152-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-152/151-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-163/152-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-154A/152-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-102-3:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-153/2153-U1-4/U2-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-153/203-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-153/204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-152/153-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-153/154-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-154A/153-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
0154-U1	154 Waste Evaporator Steam Generator Room	E, D	E, R, D, S, N	E, R, D, B	<p>Detection System, 1A-101-5:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-102-11:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-102-4:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- NPO: Required to meet NPO criteria. Detection System, 1A-118-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-118-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-25-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 1A-25-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-25-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-25-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-154/2154-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-155/2155-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2160/160-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-103/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-105/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-106/164-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-140/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154/204-4/4-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-155/255-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-162/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-162/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-163/213-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-163/214-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/212-4/16-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/213-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-177/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-153/154-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-154A/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-155/156-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-164/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-175/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-176/177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-154A/153-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-163/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-164/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-167/164-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-169/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-170/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-172/161-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-173/161-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-179/177-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-184/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-154/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-154A/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-156/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/176-4/4-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-163/168-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-170/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-154A/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-164/165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-170/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-183/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-155-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-161-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-162-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-118-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-25-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-25-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-25-4: -- DID: Required to meet DID criteria.
0154A-U1	154A Valve Compartment Room	—	—	—	—
0155-U1	155 Passageway to Unit 2(1)	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0156-U1	156 Holdup Tank Room	—	E, R, D	R, B	<p>Detection System, 1A-104-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-N-156/2156-U1-4/U2-4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2156/156-U2-4/U1-4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/301-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/302-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/314-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/315-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-155/156-4/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-156/157-4/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-156/157-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-156/162-4/4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-156/209-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-156/205-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p>
0157-U1	157 Holdup Tank Room	—	E, R, D	R, B	<p>Detection System, 1A-104-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-S-2157/157-U2-4/U1-4-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/302-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/303-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/305-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/311-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/313-4/4-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/314-4/4-139:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0158-U1	158 Holdup Tank Room	—	E, R, D	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/157-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/157-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-157/2157-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.  Detection System, 1A-104-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2158/158-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-158/2158-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0159-U1	159 Recycle Evaporator Feed Pump Room	—	—	R, B	-- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2159/159-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-159/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0160-U1	160 Hatch Area	—	—	—	FireBarrier, U1-FNP-N-0177/0160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0161-U1	161 Corridor	—	—	—	—
0162-U1	162 Hallway	—	—	—	—
0163-U1	163 WDS Control Panel Room	—	—	—	—
0164-U1	164 Laundry and Hot Shower Tank Room/Storage Room	—	—	—	—
0165-U1	165 Waste Gas Decay Tank Room	—	—	—	—
0166-U1	166 Waste Gas Decay Tank Room	—	—	—	—
0168-U1	168 Chemical and Laundry Drain Tank Room	D	E, R, S, N	R, D, B	Detection System, 1A-25-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-109/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-110/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-168/224-4/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-168/225-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-167/168-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-163/168-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-168/185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0170-U1	170 Letdown Heat Exchanger Room	—	E, R, D, S, N	R, B	<p>FireBarrier, U1-FNP-W-169/168-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.  Restricted transient controls, U1-4-AUX BUILDING-168-Restricted transient controls:  -- DID: Required to meet DID criteria.  Water Suppression, WS-1A-25-5:  -- DID: Required to meet DID criteria.</p> <p>Detection System, 1A-101-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-111/170-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-170/209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-170/216-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-170/217-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-N-170/161-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-N-171/170-95/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-S-170/162-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-170/162-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-171/170-95/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-172/170-5/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0175-U1	175 Hallway	E, D	E, R, D, S, N	R, B	Detection System, 1A-118-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-175/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/175-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-173/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-174/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-181/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-175/186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-118-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
0176-U1	176 Secondary Spent-Resin Storage Tank Room	—	—	R, B	FireBarrier, U1-FNP-Ceiling-176/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-176/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-176/177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-176/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0177-U1	177 Pump Room	—	—	—	Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0178-U1	178 Filter Room	—	E, R, S, N	R, B	FireBarrier, U1-FNP-N-0177/0160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-101-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-178/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-179/178-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0180-U1	180 Recycle Evaporator Steam Generator Room	D	E, R, S, N	R, B	Detection System, 1A-101-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-101-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-118-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-180/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-187/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-172/186-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-186/188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-175/186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-176/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-179/187-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/CTMT-4/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-187/188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-179/180-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-118-7: -- DID: Required to meet DID criteria.
0186-U1	186 Boric Acid Area	—	—	—	—
0187-U1	187 Hydro Test Pump Room	—	—	—	—
0188-U1	188 Boric Acid Tank Area	—	E, R, S, N	R, B	Detection System, 1A-103-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-188/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-188/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-188/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-188/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0203-U1	203 Waste Condenser Tanks and Pump Room	E, D	E, R, D, S, N	E, R, B	<p>FireBarrier, U1-FNP-S-187/188-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-188/238-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-188/237-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-103-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-103-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-104-4:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-104-9:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-35-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-35-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-35-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-35-4:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-35-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-203/2203-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2205/205-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2207/207-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-140/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-153/203-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-162/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-170/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-172/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-173/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-174/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-176/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-178/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-203/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-205/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/175-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/317-34/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-222/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-237/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-203/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-204/205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/253-4/4-121:



## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-207/601-4/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-207/602-4/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-207/602-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-208/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-214/209-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-217/218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-222/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-223/222-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-237/238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-245/209-20/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE1/203-4/51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-216/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-253/2253-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-156/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-204/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-206/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-218/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/208-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-156/205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-188/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-203/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-204/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-209/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-209/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-216/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-237/CTMT-4/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/208-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0204-U1	204 Waste Evaporator Package Room	—	E, R, S, N	R, B	<p>Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.  Restricted transient controls, U1-4-AUX BUILDING-205-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Restricted transient controls, U1-4-AUX BUILDING-207-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Restricted transient controls, U1-4-AUX BUILDING-208-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Water Suppression, WS-1A-130-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support a fire area boundary evaluation.  Water Suppression, WS-1A-35-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support a fire area boundary evaluation.  Water Suppression, WS-1A-35-3:  -- DID: Required to meet DID criteria.  Water Suppression, WS-1A-35-4:  -- DID: Required to meet DID criteria.</p> <p>Detection System, 1A-104-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.  FireBarrier, U0-FNP-N-204/2204-U1-4/U2-4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-153/204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-154/204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-154A/204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-161/204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-204/317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-E-203/204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-E-204/205-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-S-204/209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-204/209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria.
0205-U1	205 Passageway to Unit 2	—	—	—	—
0206-U1	206 Heat Exchanger Room	—	E, R, S	R, B	Detection System, 1A-104-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2206/206-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-159/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-206/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0207-U1	207 Hatch Area	—	—	—	—
0208-U1	208 Corridor	—	—	—	FireBarrier, U1-FNP-W-605/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0209-U1	209 Hallway	—	—	—	—
0215-U1	215 Duct and Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-Ceiling-162/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/402-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0216-U1	216 Valve Compartments Area	—	E, R, S	R, B	<p>FireBarrier, U1-FNP-N-STAIR 2/215-S02/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-STAIR 2/215-S02/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-209/215-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-215/STAIR 2-4/S02-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-209/215-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-215/214-4/17-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-215/318-4/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-215/417-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-103-8:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-170/216-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-216/324-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-216/217-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-216/209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-216/223-1/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-216/209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
0217-U1	217 Volume Control Tank Room	—	—	R, B	<p>FireBarrier, U1-FNP-Ceiling-170/217-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-171/217-95/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-217/324-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-216/217-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-217/218-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-209/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-217/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0218-U1	218 Chiller Unit Room	—	—	—	—
0219-U1	219 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-E-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-219/602-4/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/219-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0220-U1	220 Valve Compartment Room	—	E, R, S, N	R, B	Detection System, 1A-103-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-177/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-221/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-220/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-220/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0221-U1	221 Primary Spent-Resin Storage Tank Room	—	—	R, B	FireBarrier, U1-FNP-Ceiling-176/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-221/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-221/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-220/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0222-U1	222 Corridor	—	—	—	—
0230-U1	230 Recycle Evaporator Package Room	—	E, R, S, N	R, B	Detection System, 1A-103-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-175/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-180/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-222/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-221/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-230/237-4/4-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0231-U1	231 Sluice Pump Room	—	E, R, S, N	R, B	-- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Detection System, 1A-103-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-179/231-96/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-231/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-231/604-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-231/605-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-220/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-231/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0232-U1	232 Sluice Filter Room	—	E, R, S, N	R, B	Detection System, 1A-103-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-187/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-232/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-188/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-231/232-4/4-121:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0236-U1	236 Duct Chase	—	—	R, B	-- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-131/CHASE-1/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/236-6/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-CHASE (U1)/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-236/334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-236/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-250/236-31/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/235-4/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-236/241-4/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-223/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/235-4/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0237-U1	237 Corridor	—	—	—	—
0238-U1	238 Cask Storage Area	—	E, R, S, N	R, B	Detection System, 1A-107-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-2:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-237/238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-238/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-239/349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-238/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-188/238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-238/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-139:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-447/348-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-448/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-450/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-238/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-349/348-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0239-U1	239 Transfer Canal	—	—	—	—
0240-U1	240 Spent-Fuel Pool Room	—	—	—	—
0253-U1	253 Valve Compartment	—	—	—	—
0301-U1	301 Seal Water Filter Room	—	E, R, S, N	R, B	Detection System, 1A-105-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-12: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-302/2302-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-303/2303-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-304/2304-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-305/2305-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2301/301-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/301-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/303-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/313-4/4-139:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-301/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-302/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-303/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-304/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-305/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-311/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-313/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-314/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-315/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-305/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-307/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-311/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-301/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-315/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0302-U1	302 Recycle Evaporator Feed Filter Room	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0303-U1	303 Reactor Coolant Filter Room	—	—	—	—
0304-U1	304 Waste Monitor	—	—	—	—
0305-U1	305 Seal Injection Filter Room	—	—	—	—
0306-U1	306 Recycle Evaporator Feed Demineralizer Room	—	—	R, B	FireBarrier, U0-FNP-N-306/2306-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-306/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-305/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-306/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-306/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0307-U1	307 Valve Compartment Room	E, D	E, R, D, S, N	E, R, B	Detection System, 1A-105-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-48-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 1A-48-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>Detection System, 1A-48-4:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-48-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-48-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-48-9:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-49-3:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-316/2316-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-309/2309-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-188/330-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-205/316-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-206/307-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-206/310-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-207/309-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-207/310-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-208/312-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-208/327-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-208/330-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-208/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-222/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-237/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-309/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-310/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-312/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-312/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-316/403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-322/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-325/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-327/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-330/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-332/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-332/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-351/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-238/332-4/4-139:



## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-307/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-308/309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-309/601-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-309/602-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-309/602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-312/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-322/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-324/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-325/326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-326/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-327/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-330/609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-332/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-347/332-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-351/605-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE1/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-322/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-N-351/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-306/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-308/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-309/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-311/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-322/334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-325/347-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-330/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-331/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-301/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-315/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-316/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-330/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-351/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-309-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-316-Restricted transient

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0308-U1	308 Waste Condensate and Monitor Tank Demineralizer Room	—	—	R, B	<p>controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Restricted transient controls, U1-4-AUX BUILDING-322-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Water Suppression, WS-1A-48-1:  -- DID: Required to meet DID criteria.  Water Suppression, WS-1A-48-2:  -- DID: Required to meet DID criteria.  Water Suppression, WS-1A-48-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-308/2308-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-207/308-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-253/308-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-308/405-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-Ceiling-308/441-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-E-306/308-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-E-308/309-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-S-308/310-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
0309-U1	309 Hatch Area	—	—	—	—
0310-U1	310 Valve Compartment Room	—	—	—	—
0311-U1	311 Recycle Evaporator Concentrates Filter Room	—	—	—	—
0312-U1	312 Corridor	—	—	—	—
0313-U1	313 Floor Drain and Laundry Tank Filter Room	—	—	—	—
0314-U1	314 Waste Evaporator Feed Filter Room	—	—	—	—
0315-U1	315 Recycle Waste Condenser Filter Room	—	—	—	—
0316-U1	316 Passageway to Unit 2	—	—	—	—
0322-U1	322 Hallway	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0323-U1	323 Sample Room	—	E, R, S, N	R, B	Detection System, 1A-49-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-209/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-323/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-323/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-322/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-323/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-323/334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0324-U1	324 Primary Chemistry Lab	—	E, R, S, N	R, B	Detection System, 1A-49-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-209/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-216/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-217/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-323/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-324/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-333/324-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0325-U1	325 Counting Room/Spectro- photometer Lab	—	—	—	—
0326-U1	326 Radiochemistry Lab	—	E, R, S, N	R, B	Detection System, 1A-49-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-326/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-325/326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-326/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-326/347-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0327-U1	327 Valve Access Area	—	—	—	—
0328-U1	328 BTR Demineralizer Room	—	—	R, B	FireBarrier, U1-FNP-Ceiling-328/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-328/602-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-328/602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-328/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-328/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-328/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0329-U1	329 Pipe Tunnel	—	E, R, N	R, B	Detection System, 1A-105-20: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-329/422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-329/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-605/329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-610/329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/329-S10/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-602/329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-603/329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0330-U1	330 Chiller Surge Tanks Pump Room	—	—	—	FireBarrier, U1-FNP-E-330/605-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0331-U1	331 Valve Access Area	—	E, R, S, N	R, B	Detection System, 1A-48-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-188/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-231/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-331/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/331-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-331/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-328/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-331/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-330/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-331/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-602/331-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0332-U1	332 MCC 1A/2A Area	—	—	—	—
0340-U1	340 Demineralizer Compartment	—	—	R, B	FireBarrier, U1-FNP-Ceiling-221/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-340/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-331/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0341-U1	341 Pipe Chase	—	—	R, B	FireBarrier, U1-FNP-E-341/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0342-U1	342 Spent-Fuel Pool Pump Room	—	E, R, S, N	R, B	Detection System, 1A-48-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-188/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-332/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-238/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-330/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0348-U1	348 Cask Wash Area	—	—	—	—
0351-U1	Chiller Surge Tank Room	—	—	—	—
0400-U1	Primary Access Point	—	E, R, D	E, R, B	Detection System, 1A-114-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-E-400/415-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-465/400-13/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-466/400-13/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-400/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/400-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Plant staff Training, U1-4-AUX BUILDING-400-Plant staff Training: -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0402-U1	402 Passage to Unit 2	D	E, R, S, N	R, B	<p>Detection System, 1A-114-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-114-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2402/402-U2-4/U1-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-317/402-34/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-318/417-40/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-402/403-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-402/409-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-402/410A-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-417/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-215/402-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-415/417-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-417/401-4/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-215/417-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-402/401-4/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-417/416-4/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Water Suppression, WS-1A-114-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>Water Suppression, WS-1A-114-4:</p> <p>-- DID: Required to meet DID criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0403-U1	403 Hot Instrument Shop	—	E, R, S, N	R, B	Detection System, 1A-57-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-403/2403-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-316/403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-317/403-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-402/403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0405-U1	405 Hatch Room	—	E, R, S, N	R, B	Detection System, 1A-107-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-57-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-57-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-405/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-306/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-308/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-312/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-327/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-329/422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-329/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-332/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-422/467-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-404/405-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-405/407-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-418/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-419/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-421/422-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-423/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-445/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-447/446-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-467/422-4/4-165: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-405/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-418/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-419/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-427/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-446/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-467/446-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-419/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-427/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/419-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0406-U1	406 Decontamination Room	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 1A-136-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-E-2406/406-U2-4/U1-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-406/2405-U1-4/U2-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-601/406-93/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-602/406-93/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-406/407-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-406/441-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-406/408-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2602/406-93/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-4-AUX BUILDING-406-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-136-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>
0407-U1	407 Hot Machine Shop	—	E, R, D, S, N	E, R, B	<p>Detection System, 1A-107-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-407/2408-U1-4/U2-4-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-407/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-603/407-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-405/407-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-406/407-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-407/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-407/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2603/407-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-407-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0408-U1	408 Hallway	—	E, R, D, S, N	E, R, B	Detection System, 1A-107-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-57-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-312/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-322/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-323/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-328/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/409-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-602/408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-603/408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-402/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-408/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/408-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-418/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-421/408-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-467/408-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-404/409-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-406/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-407/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-404/409-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-418/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-409-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0409-U1	409 Hallway	—	—	—	—
0410A-U1	410A 600-V Load Center	D	E, R, S, N	—	Detection System, 1A-57-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-317/410A-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-402/410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-50-1: -- DID: Required to meet DID criteria.
0410B-U1	410B 600-V Load Center	D	E, R, S, N	—	Detection System, 1A-57-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-CEILING-317/410B-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-50-2: -- DID: Required to meet DID criteria.
0415-U1	415 Corridor	—	—	—	—
0417-U1	417 Corridor	—	—	—	—



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0418-U1	418 Auxiliary Building and Containment Purge Vent Equipment Room	D	E, R, S, N	R, B	<p>Detection System, 1A-107-6:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-114-4:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-324/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-325/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-326/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-333/418-35/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-333/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-335/415-41/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-347/418-35/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-347/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-400/415-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-415/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-415/481-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-418/419-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-418/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-415/417-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-418/405-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-418/408-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/432-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/480-4/4-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/481-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-416/415-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-418/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/400-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-418/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-114-3: -- DID: Required to meet DID criteria.
0419-U1	419 Demineralizer Hatch Area	—	—	—	—
0422-U1	422 Corridor	—	—	—	—
0423-U1	423 Valve Compartment	—	—	—	—
0424-U1	424 Demineralizer Compartment	—	—	R, B	FireBarrier, U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0425-U1	425 Demineralizer Compartment	—	—	R, B	FireBarrier, U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0426-U1	426 Demineralizer Compartment	—	—	R, B	FireBarrier, U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0427-U1	427 Demineralizer Compartment	—	—	R, B	FireBarrier, U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-427/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-427/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0429-U1	429 Containment Purge Air Equipment Room	—	E, R, D, S, N	E, R, B	Detection System, 1A-108-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-323/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-334/429-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-236/429-4/4-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-415/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-417/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-429/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-429/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/438-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-429-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 1A-114-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0432-U1	432 Corridor	D	E, R, S, N	R, B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-432/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-465/432-13/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-432/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/432-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-432/454-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-432/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-432/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-114-5: -- DID: Required to meet DID criteria.
0438-U1	438 Hot Water Heater Room	D	E, R, S, N	R, B	Detection System, 1A-108-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-438/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-438/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/438-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-438/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-1: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0441-U1	441 Tool Room	—	E, R, D, S	E, R, B	Detection System, 1A-57-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-N-441/2406-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-308/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-309/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-310/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-406/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-405/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-404/441-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-441-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0445-U1	445 Spent-Fuel Pool Heat Exchanger Room	—	E, R, S, N	R, B	Detection System, 1A-107-17: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-107-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-342/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-445/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-447/445-98/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-N-449/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-450/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-420/445-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-421/445-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-448/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-445/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-447/448-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-448/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0446-U1	446 Hallway	—	—	—	—
0448-U1	448 SFPC Pump Room	—	—	—	—
0449-U1	449 Demineralizer Room	—	—	R, B	FireBarrier, U1-FNP-Ceiling-342/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-449/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-450/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-450/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-448/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-450/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0450-U1	450 Valve Compartment	—	—	—	—
0451-U1	451 Filter Room	—	—	R, B	FireBarrier, U1-FNP-Ceiling-342/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-238/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-450/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-451/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0453-U1	453 Clean Janitor	D	E, R, S, N	R, B	Detection System, 1A-108-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/453-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-453/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-453/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-2: -- DID: Required to meet DID criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0454-U1	454 Lobby	E, D	E, R, D, S, N	E, R, B	Detection System, 1A-114-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-345/454-42/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/454-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-454/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-454/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/454-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/454-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-432/454-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-454-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-114-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
0455-U1	455 Clean Toilet Room (Men's)	—	—	—	—
0456-U1	456 Drying Area	D	E, R, S, N	R, B	Detection System, 1A-108-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/456-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-455/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-456/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-488/456-4/4-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0461-U1	461 Dosimetry Lab	D	E, R, S, N	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-4: -- DID: Required to meet DID criteria.  Detection System, 1A-51-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-249/461-30/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-250/461-31/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/461-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-454/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/461-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-455/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-456/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-461/462-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-491/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1A-52B-5: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0462-U1	462 Nonradioactive Vent Equipment Room	D	E, R, S, N	R, B	Detection System, 1A-51-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/462-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-462/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-461/462-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/463-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/462-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/462-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-462/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-51-1: -- DID: Required to meet DID criteria.
0463-U1	463 Storage Room	—	E, R, S, N	R, B	Detection System, 1A-51-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/463-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-463/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/463-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0464-U1	464 Storage Room	—	E, R, S, N	R, B	<p>Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-51-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-463/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-464/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-462/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-464/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
0467-U1	467 SFP Heat Exchanger Room	—	E, R, S, N	R, B	<p>Detection System, 1A-107-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-422/467-4/4-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-STAIR 10/467-S10/4-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-467/422-4/4-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-467/408-4/4-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-467/446-4/4-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-467/421-4/92-165: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0478-U1	478 Motor Control Center Room	—	E, R, N	R, B	<p>Detection System, 1A-107-14:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-332/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-334/478-34/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-418/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-478/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-488/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-478/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-419/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-438/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-478/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-478/CTMT-4/55-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-478/OUTSIDE-4/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-238/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-419/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-420/478-92/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-445/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-451/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0480-U1	480 Health Physics Briefing/Planning Room	D	E, R, S, N	R, B	<p>Detection System, 1A-108-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-335/480-41/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-432/480-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-480/481-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-432/480-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/480-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-480/483-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-415/480-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Water Suppression, WS-1A-52B-6:  -- DID: Required to meet DID criteria.</p>
0481-U1	481 Health Physicist Room	D	E, R, S, N	R, B	<p>Detection System, 1A-108-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-335/481-41/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-415/481-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-480/481-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-481/482-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/481-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-481/483-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0482-U1	482 Air Sample & Smear Analysis Rm.	D	E, R, S, N	R, B	<p>Water Suppression, WS-1A-52B-7: -- DID: Required to meet DID criteria.</p> <p>Detection System, 1A-108-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-335/482-41/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-481/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p> <p>Water Suppression, WS-1A-52B-8: -- DID: Required to meet DID criteria.</p>
0483-U1	483 Passage	D	E, R, S, N	R, B	<p>Detection System, 1A-108-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-335/483-41/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-432/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-483/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-483/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-480/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-481/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-482/483-4/4-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-438/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-9: -- DID: Required to meet DID criteria.
0484-U1	484 Hot Toilet (Women's)	D	E, R, S, N	R, B	Detection System, 1A-108-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-483/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-484/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-10: -- DID: Required to meet DID criteria.
0485-U1	485 Hot Toilet (Men's)	D	E, R, S, N	R, B	Detection System, 1A-108-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-483/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-438/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-484/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/485-4/4-155:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0486-U1	486 Survey Preparation Room	D	E, R, S, N	R, B	-- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-11: -- DID: Required to meet DID criteria.  Detection System, 1A-108-12: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-108-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/455-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/486-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-453/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-455/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-486/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-491/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-432/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-455/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-486/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-455/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0487-U1	487 Instrument Calibration Room	D	E, R, S, N	R, B	-- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-12: -- DID: Required to meet DID criteria. Water Suppression, WS-1A-52B-3: -- DID: Required to meet DID criteria.  Detection System, 1A-108-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/487-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-486/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-487/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-13: -- DID: Required to meet DID criteria.  Detection System, 1A-108-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/488-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-487/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-488/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-488/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions:
0488-U1	488 Instrument Issue & Storage Rm.	D	E, R, S, N	R, B	-- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-12: -- DID: Required to meet DID criteria. Water Suppression, WS-1A-52B-3: -- DID: Required to meet DID criteria.  Detection System, 1A-108-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/487-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-486/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-487/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-13: -- DID: Required to meet DID criteria.  Detection System, 1A-108-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/488-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-487/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-488/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-488/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0489-U1	489 Waste & Decon. Foreman Office	D	E, R, S, N	R, B	-- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-14: -- DID: Required to meet DID criteria. Detection System, 1A-108-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-345/489-42/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/489-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-454/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-486/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-52B-15: -- DID: Required to meet DID criteria. Detection System, 1A-108-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/490-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-490/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0490-U1	490 Clean Toilet (Women's)	D	E, R, S, N	R, B	Detection System, 1A-108-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/490-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-490/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0491-U1	491 Passage	D	E, R, S, N	R, B	<p>FireBarrier, U1-FNP-W-455/490-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.  Water Suppression, WS-1A-52B-16:  -- DID: Required to meet DID criteria.</p> <p>Detection System, 1A-108-18:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-114-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-489/491-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-491/455-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-453/491-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-490/491-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-491/461-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-453/491-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.  Water Suppression, WS-1A-52B-17:  -- DID: Required to meet DID criteria.</p>
0504-U1	504 Stair No. 6, El. 184'-0"	—	E, R, S, N	R, B	<p>Detection System, 1A-109-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-504/OUTSIDE-4/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-504/OUTSIDE-4/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-504/OUTSIDE-4/YARD-175:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0505-U1	505 Spent-Fuel Pool Vent Equipment Room	—	E, R, S, N	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Detection System, 1A-109-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0506-U1	506 Component Cooling Surge Tank Room	—	E, R, S, N	R, B	Detection System, 1A-110-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0604-U1	604 Passage	—	E, R, D, S, N	E, R, B	Detection System, 1A-105-13: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-231/604-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/604-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-602/604-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-603/604-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-604/606-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-604/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-4-AUX BUILDING-604-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0605-U1	605 Blowdown Pumps and Surge Tank Room	—	E, R, S, N	R, B	Detection System, 1A-105-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-605/421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-231/605-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-330/605-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-351/605-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-605/329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-605/609-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-605/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 10/605-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0606-U1	606 Filter Room	—	E, R, S, N	R, B	<p>Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-105-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-606/607-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-606/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-604/606-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-606/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-606/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
0607-U1	607 Filter Room	—	E, R, S, N	R, B	<p>Detection System, 1A-105-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-606/607-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-607/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-607/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
0608-U1	608 Blowdown Heat Exchanger Room	—	E, R, S, N	R, B	<p>Detection System, 1A-105-17: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-341/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-606/608-4/4-131:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0609-U1	609 Storage Room	—	E, R, S, N	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-607/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 10/608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-608/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Detection System, 1A-105-18: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-609/421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-232/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-330/609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-605/609-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0610-U1	610 Valve Compartment Room	—	E, R, S, N	R, B	Detection System, 1A-105-19: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-610/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-606/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-607/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-610/329-4/4-139:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
CHASE-U1	CHASE	—	—	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-604/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-610/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-152/CHASE (U1)-4/51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-CHASE (U1)/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE (U1)/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0140-U2	140 Waste Gas Decay Tank Drain Filter Room	
0151-U2	151 Waste Gas Decay Tank Rooms	
0152-U2	152 Valve Compartment Room	
0153-U2	153 Waste Gas Compressor Room	
0154-U2	154 Waste Evaporator Steam Generator Room	
0154A-U2	154A Valve Compartment Room	
0155-U2	155 Passageway to Unit 2(1)	
0156-U2	156 Holdup Tank Room	
0157-U2	157 Holdup Tank Room	
0158-U2	158 Holdup Tank Room	
0159-U2	159 Recycle Evaporator Feed Pump Room	
0160-U2	160 Hatch Area	
0161-U2	161 Corridor	
0162-U2	162 Hallway	
0163-U2	163 WDS Control Panel Room	
0164-U2	164 Laundry and Hot Shower Tank Room/Storage Room	
0165-U2	165 Waste Gas Decay Tank Room	
0166-U2	166 Waste Gas Decay Tank Room	
0168-U2	168 Chemical and Laundry Drain Tank Room	
0170-U2	170 Letdown Heat Exchanger Room	
0175-U2	175 Hallway	
0176-U2	176 Secondary Spent-Resin Storage Tank Room	
0177-U2	177 Pump Room	
0178-U2	178 Filter Room	
0180-U2	180 Recycle Evaporator Steam Generator Room	
0186-U2	186 Boric Acid Area	
0187-U2	187 Hydro Test Pump Room	
0188-U2	188 Boric Acid Tank Area	
0203-U2	203 Waste Condenser Tanks and Pump Room	
0204-U2	204 Waste Evaporator Package Room	
0205-U2	205 Passageway to Unit 2	
0206-U2	206 Heat Exchanger Room	
0207-U2	207 Hatch Area	
0208-U2	208 Corridor	
0209-U2	209 Hallway	
0215-U2	215 Duct and Pipe Chase	
0216-U2	216 Valve Compartments Area	
0217-U2	217 Volume Control Tank Room	
0218-U2	218 Chiller Unit Room	
0219-U2	219 Pipe Chase	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0220-U2	220 Valve Compartment Room	
0221-U2	221 Primary Spent-Resin Storage Tank Room	
0222-U2	222 Corridor	
0230-U2	230 Recycle Evaporator Package Room	
0231-U2	231 Sluice Pump Room	
0232-U2	232 Sluice Filter Room	
0236-U2	236 Duct Chase	
0237-U2	237 Corridor	
0238-U2	238 Cask Storage Area	
0239-U2	239 Transfer Canal	
0240-U2	240 Spent-Fuel Pool Room	
0253-U2	253 Valve Compartment	
0301-U2	301 Seal Water Filter Room	
0302-U2	302 Recycle Evaporator Feed Filter Room	
0303-U2	303 Reactor Coolant Filter Room	
0304-U2	304 Waste Monitor	
0305-U2	305 Seal Injection Filter Room	
0306-U2	306 Recycle Evaporator Feed Demineralizer Room	
0307-U2	307 Valve Compartment Room	
0308-U2	308 Waste Condensate and Monitor Tank Demineralizer Room	
0309-U2	309 Hatch Area	
0310-U2	310 Valve Compartment Room	
0311-U2	311 Recycle Evaporator Concentrates Filter Room	
0312-U2	312 Corridor	
0313-U2	313 Floor Drain and Laundry Tank Filter Room	
0314-U2	314 Waste Evaporator Feed Filter Room	
0315-U2	315 Recycle Waste Condenser Filter Room	
0316-U2	316 Passageway to Unit 2	
0322-U2	322 Hallway	
0323-U2	323 Sample Room	
0324-U2	324 Primary Chemistry Lab	
0325-U2	325 Counting Room/Spectro-photometer Lab	
0326-U2	326 Radiochemistry Lab	
0327-U2	327 Valve Access Area	
0328-U2	328 BTR Demineralizer Room	
0329-U2	329 Pipe Tunnel	
0330-U2	330 Chiller Surge Tanks Pump Room	
0331-U2	331 Valve Access Area	
0332-U2	332 MCC 1A/2A Area	
0340-U2	340 Demineralizer Compartment	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0341-U2	341 Pipe Chase	
0342-U2	342 Spent-Fuel Pool Pump Room	
0348-U2	348 Cask Wash Area	
0351-U2	Chiller Surge Tank Room	
0400-U2	Primary Access Point	
0402-U2	402 Passage to Unit 2	
0403-U2	403 Hot Instrument Shop	
0405-U2	405 Hatch Room	
0406-U2	406 Decontamination Room	
0407-U2	407 Hot Machine Shop	
0408-U2	408 Hallway	
0409-U2	409 Hallway	
0410A-U2	410A 600-V Load Center	
0410B-U2	410B 600-V Load Center	
0415-U2	415 Corridor	
0417-U2	417 Corridor	
0418-U2	418 Auxiliary Building and Containment Purge Vent Equipment Room	
0419-U2	419 Demineralizer Hatch Area	
0422-U2	422 Corridor	
0423-U2	423 Valve Compartment	
0424-U2	424 Demineralizer Compartment	
0425-U2	425 Demineralizer Compartment	
0426-U2	426 Demineralizer Compartment	
0427-U2	427 Demineralizer Compartment	
0429-U2	429 Containment Purge Air Equipment Room	
0432-U2	432 Corridor	
0438-U2	438 Hot Water Heater Room	
0441-U2	441 Tool Room	
0445-U2	445 Spent-Fuel Pool Heat Exchanger Room	
0446-U2	446 Hallway	
0448-U2	448 SFPC Pump Room	
0449-U2	449 Demineralizer Room	
0450-U2	450 Valve Compartment	
0451-U2	451 Filter Room	
0453-U2	453 Clean Janitor	
0454-U2	454 Lobby	
0455-U2	455 Clean Toilet Room (Men's)	
0456-U2	456 Drying Area	
0461-U2	461 Dosimetry Lab	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0462-U2	462 Nonradioactive Vent Equipment Room	
0463-U2	463 Storage Room	
0464-U2	464 Storage Room	
0467-U2	467 SFP Heat Exchanger Room	
0478-U2	478 Motor Control Center Room	
0480-U2	480 Health Physics Briefing/Planning Room	
0481-U2	481 Health Physicist Room	
0482-U2	482 Air Sample & Smear Analysis Rm.	
0483-U2	483 Passage	
0484-U2	484 Hot Toilet (Women's)	
0485-U2	485 Hot Toilet (Men's)	
0486-U2	486 Survey Preparation Room	
0487-U2	487 Instrument Calibration Room	
0488-U2	488 Instrument Issue & Storage Rm.	
0489-U2	489 Waste & Decon. Foreman Office	
0490-U2	490 Clean Toilet (Women's)	
0491-U2	491 Passage	
0504-U2	504 Stair No. 6, El. 184'-0"	
0505-U2	505 Spent-Fuel Pool Vent Equipment Room	
0506-U2	506 Component Cooling Surge Tank Room	
0604-U2	604 Passage	
0605-U2	605 Blowdown Pumps and Surge Tank Room	
0606-U2	606 Filter Room	
0607-U2	607 Filter Room	
0608-U2	608 Blowdown Heat Exchanger Room	
0609-U2	609 Storage Room	
0610-U2	610 Valve Compartment Room	
CHASE-U2	CHASE	

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0140-U2 - 140 Waste Gas Decay Tank Drain Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0151-U2 - 151 Waste Gas Decay Tank Rooms

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-1	U1-4 Detection System 1A-102-1 Room 151	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-5	U1-4 Detection System 1A-102-5 Room 165	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-6	U1-4 Detection System 1A-102-6 Room 166	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-151/2151-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2151/151-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-101/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-102/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-107/165-90/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-108/166-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/201-4/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/254-4/12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/211-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/212-4/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-166/211-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-166/226-4/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-152/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-164/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-165/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-166/185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-164/165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>				
<b>Fire Zone ID:</b>	0151-U2 - 151 Waste Gas Decay Tank Rooms					

<b>System/Feature ID</b>	<b>Description</b>	<b>Ch.3</b>	<b>Ch.4</b>	<b>Reason(s)</b>	<b>Monitoring</b>	<b>HSS</b>
U1-FNP-W-167/166-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0152-U2 - 152 Valve Compartment Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-2	U1-4 Detection System 1A-102-2 Room 152	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-152/2152-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2152/152-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-104/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-105/152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/CHASE (U1)-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-152/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-164/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-152/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-163/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-154A/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0152-U2 - 152 Valve Compartment Room	

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0153-U2 - 153 Waste Gas Compressor Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-3	U1-4 Detection System 1A-102-3 Room 153	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-153/2153-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-152/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-153/154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-154A/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0154-U2 - 154 Waste Evaporator Steam Generator Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-5	U1-4 Detection System 1A-101-5 Room 177	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-11	U1-4 Detection System 1A-102-11 Room 154A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-102-4	U1-4 Detection System 1A-102-4 Room 154	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-118-1	U1-4 Detection System 1A-118-1 Room 160	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-118-2	U1-4 Detection System 1A-118-2 Room 161	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-25-1	U1-4 Detection System 1A-25-1 Room 161	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
1A-25-2	U1-4 Detection System 1A-25-2 Room 162	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-25-3	U1-4 Detection System 1A-25-3 Room 163	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-25-4	U1-4 Detection System 1A-25-4 Room 164	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0154-U2 - 154 Waste Evaporator Steam Generator Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' North East Corridor, Room 161	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-1A-25-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' North West Corridor, Room 162	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-1A-25-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' WDS Control Panel Room, Room 163	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-1A-25-4	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Laundry & Hot Shw Tank Room, Room 164	-	Yes		Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-154/2154-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-155/2155-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-103/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-105/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-106/164-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-111/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-140/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-155/255-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-163/213-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-163/214-4/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/212-4/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/213-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-177/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-153/154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-154A/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-155/156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-164/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0154-U2 - 154 Waste Evaporator Steam Generator Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-176/177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-154A/153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-163/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-164/151-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-167/164-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-169/163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-170/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-172/161-5/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-173/161-5/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-179/177-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-184/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-154/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-154A/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-163/168-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-154A/152-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-164/165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-183/162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-01	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-02	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-169/163-1/4-100: 1-100-113-06	0:00, N. of 169	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/177-96/4-100: 1-100-114-03	0:00, S. of 177	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-155/2155-U1-4/U2-4-100 150	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 152	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 153	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-172/161-5/4-100 155	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0154-U2 - 154 Waste Evaporator Steam Generator Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-Elev 2/162-S02/4-100 Elev. No. 2 (2)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/162-S02/4-100 159	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-183/162-1/4-100 163	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/160-S08/4-100 154	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0154A-U2 - 154A Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0155-U2 - 155 Passageway to Unit 2(1)	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0156-U2 - 156 Holdup Tank Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-1	U1-4 Detection System 1A-104-1 Room 156	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-156/2156-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2156/156-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-155/156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-156/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0157-U2 - 157 Holdup Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-2	U1-4 Detection System 1A-104-2 Room 157	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2157/157-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-156/157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-157/2157-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0157-U2 - 157 Holdup Tank Room

**Systems and Features**

### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0158-U2 - 158 Holdup Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-3	U1-4 Detection System 1A-104-3 Room 158	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2158/158-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-157/158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-158/2158-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0159-U2 - 159 Recycle Evaporator Feed Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2159/159-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-159/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-159/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0160-U2 - 160 Hatch Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100	3:00, , U1 3 Unrated Barrier at ele 100 between Rooms 177/160 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100 181	0:00,	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0161-U2 - 161 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A41	Aux. Bldg-100'-North Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0162-U2 - 162 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A42	Aux. Bldg-100'-Near Waste Evap. Steam Gen.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0163-U2 - 163 WDS Control Panel Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A16	Aux. Bldg-100'-West End of Hallway	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0164-U2 - 164 Laundry and Hot Shower Tank Room/Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0165-U2 - 165 Waste Gas Decay Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0166-U2 - 166 Waste Gas Decay Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0168-U2 - 168 Chemical and Laundry Drain Tank Room	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-25-5	U1-4 Detection System 1A-25-5 Room 168	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-25-5	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Chem & Laundry Dr Tank Room, Room 168	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-109/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-110/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-168/224-4/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-168/225-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-167/168-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-163/168-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-168/185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-169/168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-169/168-1/4-100: 1-100-113-05	0:00, W. of 169	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0168-U2 - 168 Chemical and Laundry Drain Tank Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0170-U2 - 170 Letdown Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-2	U1-4 Detection System 1A-101-2 Room 170	-	Yes		Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-111/170-1/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-170/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-170/216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-170/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-170/161-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-171/170-95/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-170/162-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-171/170-95/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0175-U2 - 175 Hallway	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-118-5	U1-4 Detection System 1A-118-5 Room 175	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-5	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Hallway to Boric Acid Room, Room 175	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-175/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-175/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-175/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/175-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-173/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-174/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-175/160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-181/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-175/186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0175-U2 - 175 Hallway

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0176-U2 - 176 Secondary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-176/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-176/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-176/177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-160/176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-176/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0177-U2 - 177 Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100	3:00, , U1 3 Unrated Barrier at ele 100 between Rooms 177/160 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-0177/0160-4/4-100 181	0:00,	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0178-U2 - 178 Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-6	U1-4 Detection System 1A-101-6 Room 178	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-178/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/178-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-179/178-96/4-100; 1-100-114-04	0:00, S. of 178	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0180-U2 - 180 Recycle Evaporator Steam Generator Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-11	U1-4 Detection System 1A-101-11 Room 187	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-101-7	U1-4 Detection System 1A-101-7 Room 180	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-118-7	U1-4 Detection System 1A-118-7 Room 186	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-7	Preaction Sprinkler System, U1-4, Aux Building Elevation 100' Boric Acid Area, Room 186	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-180/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-187/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-172/186-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-175/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-175/186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-176/180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-179/187-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/CTMT-4/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-187/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-179/180-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0180-U2 - 180 Recycle Evaporator Steam Generator Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-179/187-96/4-100: 1-100-114-05	0:00, S. of 179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-179/180-96/4-100: 1-100-114-01	0:00, W. of 179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-179/180-96/4-100 184	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0186-U2 - 186 Boric Acid Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A40	Aux. Bldg-100'-Near Boric Acid Pump Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0187-U2 - 187 Hydro Test Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0188-U2 - 188 Boric Acid Tank Area	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-1	U1-4 Detection System 1A-103-1 Room 188	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-188/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-188/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-188/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-188/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-187/188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-188/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-188/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0203-U2 - 203 Waste Condenser Tanks and Pump Room

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-2	U1-4 Detection System 1A-103-2 Room 218	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
1A-103-7	U1-4 Detection System 1A-103-7 Room 237	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-104-4	U1-4 Detection System 1A-104-4 Room 203	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-104-9	U1-4 Detection System 1A-104-9 Room 253	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
1A-35-1	U1-4 Detection System 1A-35-1 Room 205	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-2	U1-4 Detection System 1A-35-2 Room 207	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-3	U1-4 Detection System 1A-35-3 Room 208	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-4	U1-4 Detection System 1A-35-4 Room 209	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-35-5	U1-4 Detection System 1A-35-5 Room 222	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0203-U2 - 203 Waste Condenser Tanks and Pump Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-130-1	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 121' System East Operator Work Station West Pipe System, Room 207	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-1A-35-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 121' Corridor, Room 208	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-1A-35-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 121' Corridor, Room 209	-	Yes		Yes	-
WS-1A-35-4	Preaction Sprinkler System, U1-4, Aux Building Elevation 121' Corridor, Room 222	-	Yes		Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-203/2203-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2205/205-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-140/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-170/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-173/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-174/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-175/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-175/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-176/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-178/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-203/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-205/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/175-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/317-34/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-209/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0203-U2 - 203 Waste Condenser Tanks and Pump Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-209/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-222/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-237/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-203/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-204/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/601-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-208/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-214/209-4/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-217/218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-222/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-223/222-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-237/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-245/209-20/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/203-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-253/2253-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-156/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-157/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-158/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-206/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-218/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-237/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/208-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-156/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-188/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-203/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0203-U2 - 203 Waste Condenser Tanks and Pump Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-208/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-237/CTMT-4/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/208-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2205/205-U2-4/U1-4-121 202	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121 203	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-207/602-4/93-121 329A	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/209-S02/4-121 212	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-216/209-4/4-121 232	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U1-FNP-N-Elev 2/209-S02/4-121 Elev. No. 2 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/208-S08/4-121 205	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-205-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-207-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-208-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0204-U2 - 204 Waste Evaporator Package Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-5	U1-4 Detection System 1A-104-5 Room 204	-	Yes		Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-204/2204-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-153/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-154A/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-161/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-204/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-203/204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-204/205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-204/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0205-U2 - 205 Passageway to Unit 2

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0206-U2 - 206 Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-6	U1-4 Detection System 1A-104-6 Room 206	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2206/206-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-159/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-160/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-158/206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-206/253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-206/208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0207-U2 - 207 Hatch Area

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0208-U2 - 208 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A37	Aux. Bldg-121'-North Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-605/208-4/4-121	3:00, , U1 3 Unrated Barrier at ele 121 between Rooms 605/208 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0209-U2 - 209 Hallway

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A38	Aux. Bldg-121'-Near Recycle Evap. Cont. Panel	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0215-U2 - 215 Duct and Pipe Chase

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-162/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-215/402-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-215/STAIR 2-4/S02-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/214-4/17-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-01	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-162/215-4/4-121: 1-121-133-02	0:00, F. of 215	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/317-4/34-139: 1-139-118-08	0:00, S. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-STAIR 2/215-S02/4-155 411	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0215-U2 - 215 Duct and Pipe Chase	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0216-U2 - 216 Valve Compartments Area	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-8	U1-4 Detection System 1A-103-8 Room 216	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-170/216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-216/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-216/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-216/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-216/209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-216/209-4/4-121 232	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0217-U2 - 217 Volume Control Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-170/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-171/217-95/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-217/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-216/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-217/218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-209/217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-217/223-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0218-U2 - 218 Chiller Unit Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0219-U2 - 219 Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-219/602-4/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-208/219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/219-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0220-U2 - 220 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-3	U1-4 Detection System 1A-103-3 Room 220	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-177/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-221/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-220/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-208/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-220/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0221-U2 - 221 Primary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-176/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-221/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-221/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-221/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-221/220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-208/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-221/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-220/221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0222-U2 - 222 Corridor

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0230-U2 - 230 Recycle Evaporator Package Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-4	U1-4 Detection System 1A-103-4 Room 230	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-175/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-180/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-186/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-222/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-221/230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-230/237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0231-U2 - 231 Sluice Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-5	U1-4 Detection System 1A-103-5 Room 231	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-179/231-96/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-231/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-231/604-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-231/605-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-220/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-231/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-208/231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0232-U2 - 232 Sluice Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-103-6	U1-4 Detection System 1A-103-6 Room 232	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-187/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-230/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-232/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-188/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-208/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-231/232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0236-U2 - 236 Duct Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-131/CHASE-1/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/236-6/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-CHASE (U1)/236-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-250/236-31/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-236/241-4/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-223/236-1/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-03	0:00, F. of 236	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-04	0:00, F. of 236	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-131/CHASE-1/4-155: 1-120-133-05	0:00, F. of 236	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/346-4/41-139: 1-139-119-16	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-07	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-08	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-18	0:00, S. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-19	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-13	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-14	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-15	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0236-U2 - 236 Duct Chase

Systems and Features

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0237-U2 - 237 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0238-U2 - 238 Cask Storage Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-1	U1-4 Detection System 1A-107-1 Room 238	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-16	U1-4 Detection System 1A-107-16 Room 239	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-107-2	U1-4 Detection System 1A-107-2 Room 240	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-237/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-238/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-188/238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-238/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0238-U2 - 238 Cask Storage Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-447/348-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-448/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-450/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-238/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-349/348-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-240/459-4/39-155: 1-155-106-01	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-02	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-03	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-04	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-447/348-98/4-155 434	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0239-U2 - 239 Transfer Canal

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0240-U2 - 240 Spent-Fuel Pool Room

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0253-U2 - 253 Valve Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0301-U2 - 301 Seal Water Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-1	U1-4 Detection System 1A-105-1 Room 301	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-10	U1-4 Detection System 1A-105-10 Room 313	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-11	U1-4 Detection System 1A-105-11 Room 314	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-12	U1-4 Detection System 1A-105-12 Room 315	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-2	U1-4 Detection System 1A-105-2 Room 303	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-3	U1-4 Detection System 1A-105-3 Room 304	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-4	U1-4 Detection System 1A-105-4 Room 305	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-8	U1-4 Detection System 1A-105-8 Room 311	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0301-U2 - 301 Seal Water Filter Room

Systems and Features

### Active Fire Protection - Suppression

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-302/2302-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-303/2303-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-304/2304-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-305/2305-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2301/301-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-156/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-157/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-158/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-301/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-302/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-303/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-304/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-305/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-311/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-313/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-314/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-315/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-305/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-307/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-311/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-301/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-315/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0301-U2 - 301 Seal Water Filter Room	

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0302-U2 - 302 Recycle Evaporator Feed Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0303-U2 - 303 Reactor Coolant Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0304-U2 - 304 Waste Monitor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0305-U2 - 305 Seal Injection Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0306-U2 - 306 Recycle Evaporator Feed Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-306/2306-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-306/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-305/306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-306/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-306/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0307-U2 - 307 Valve Compartment Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-5	U1-4 Detection System 1A-105-5 Room 307	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-6	U1-4 Detection System 1A-105-6 Room 309	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-7	U1-4 Detection System 1A-105-7 Room 310	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-105-9	U1-4 Detection System 1A-105-9 Room 312	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-1	U1-4 Detection System 1A-48-1 Room 309	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
1A-48-10	U1-4 Detection System 1A-48-10 Room 351	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-48-2	U1-4 Detection System 1A-48-2 Room 312	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-4	U1-4 Detection System 1A-48-4 Room 322	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-5	U1-4 Detection System 1A-48-5 Room 330	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-48-7	U1-4 Detection System 1A-48-7 Room 332	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0307-U2 - 307 Valve Compartment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-9	U1-4 Detection System 1A-48-9 Room 316	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-49-3	U1-4 Detection System 1A-49-3 Room 325	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-48-1	Preaction Sprinkler System, U1-4, Aux Building Elevation 139' North Corridor, Room 312	-	Yes		Yes	-
WS-1A-48-2	Preaction Sprinkler System, U1-4, Aux Building Elevation 139' Passageway to Unit 2, Room 316	-	Yes		Yes	-
WS-1A-48-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 139' Hallway, Room 322	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-188/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-205/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-206/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-209/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-221/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-221/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-222/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-237/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-309/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-310/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-312/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-312/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0307-U2 - 307 Valve Compartment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-316/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-322/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-325/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-327/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-330/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-332/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-332/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-351/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-307/311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-308/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/601-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-309/602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-312/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-322/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-324/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-325/326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-326/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-327/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-330/609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-332/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-347/332-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-351/605-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE1/316-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-312/315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-322/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-326/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-326/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-351/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-306/307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-308/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-309/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-311/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-322/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-325/347-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-330/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-331/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-301/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-315/316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-316/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0307-U2 - 307 Valve Compartment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-330/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-351/351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-322/317-4/34-139: 1-139-118-17	0:00, N. of 322	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-316/317-4/34-139: 1-139-118-12	0:00, E. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139 302	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 304	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-312/Stair 8-4/S08-139 305	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-322/317-4/34-139 311	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-Elev 2/322-S02/4-139 Elev. No. 2 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/322-S02/4-139 316	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-309-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-316-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-4-AUX BUILDING-322-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0308-U2 - 308 Waste Condensate and Monitor Tank Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-308/2308-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-207/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-253/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-306/308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-308/309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-308/310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0309-U2 - 309 Hatch Area

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0310-U2 - 310 Valve Compartment Room

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0311-U2 - 311 Recycle Evaporator Concentrates Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0312-U2 - 312 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A36	Aux. Bldg-139'-North Corridor-West End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0313-U2 - 313 Floor Drain and Laundry Tank Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0314-U2 - 314 Waste Evaporator Feed Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0315-U2 - 315 Recycle Waste Condenser Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0316-U2 - 316 Passageway to Unit 2	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0322-U2 - 322 Hallway	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0323-U2 - 323 Sample Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-49-1	U1-4 Detection System 1A-49-1 Room 323	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-209/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-323/409-4/4-155	0:00, marshmallows,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-323/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-322/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-323/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-323/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0324-U2 - 324 Primary Chemistry Lab	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A12	Aux. Bldg-139'-Primary chemistry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A14	Aux. Bldg-139'-Primary Chemistry lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-49-2	U1-4 Detection System 1A-49-2 Room 324	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-209/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-216/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-217/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-323/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-324/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-333/324-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-312/324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0324-U2 - 324 Primary Chemistry Lab

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0325-U2 - 325 Counting Room/Spectro-photometer Lab

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0326-U2 - 326 Radiochemistry Lab	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A13	Aux. Bldg-139'-Radio-Chemistry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-49-4	U1-4 Detection System 1A-49-4 Room 326	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-326/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-325/326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-326/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-326/312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-326/325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-326/347-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0327-U2 - 327 Valve Access Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0328-U2 - 328 BTR Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-328/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-328/602-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-328/602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-328/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-328/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-328/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0329-U2 - 329 Pipe Tunnel

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-329/422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-329/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-605/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-610/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/329-S10/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-603/329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0330-U2 - 330 Chiller Surge Tanks Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-330/605-4/4-139	1:00, , U1 Unrated Barrier at ele 139 between Rooms 330/605 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0331-U2 - 331 Valve Access Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-6	U1-4 Detection System 1A-48-6 Room 331	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-188/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-208/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-231/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-232/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-331/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/331-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-331/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-328/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-331/330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-330/331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-331/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-602/331-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0332-U2 - 332 MCC 1A/2A Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A11	Aux. Bldg-139'-Sample Room (outside)	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A35	Aux. Bldg-139'-East Corridor near MCC	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0340-U2 - 340 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-221/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-230/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-340/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-331/340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-340/332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0341-U2 - 341 Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-341/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0342-U2 - 342 Spent-Fuel Pool Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-8	U1-4 Detection System 1A-48-8 Room 342	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-188/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-332/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-238/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-330/342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0348-U2 - 348 Cask Wash Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0351-U2 - Chiller Surge Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0400-U2 - Primary Access Point	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-1	U1-4 Detection System 1A-114-1 Room 400	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-400/415-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-465/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-466/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-400/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/400-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-465/400-13/4-155 456	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/400-4/4-155 419	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-400-Plant staff Training	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0402-U2 - 402 Passage to Unit 2	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-3	U1-4 Detection System 1A-114-3 Room 402	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-114-5	U1-4 Detection System 1A-114-5 Room 417	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-1	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Passageway to Unit 2, Room 402	-	Yes		Yes	-
WS-1A-114-4	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Corridor, Room 417	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-317/402-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-318/417-40/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-417/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/402-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-415/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-417/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-402/401-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-417/416-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0402-U2 - 402 Passage to Unit 2	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155 401	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0403-U2 - 403 Hot Instrument Shop	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-1	U1-4 Detection System 1A-57-1 Room 403	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-403/2403-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-316/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-317/403-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0405-U2 - 405 Hatch Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A32	Aux. Bldg-155'-North Corridor-East End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-8	U1-4 Detection System 1A-107-8 Room 423	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-57-2	U1-4 Detection System 1A-57-2 Room 405	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-57-6	U1-4 Detection System 1A-57-6 Room 419	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-405/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-306/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-312/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-327/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-329/422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-329/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-332/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-422/467-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-404/405-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-405/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-418/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-419/420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0405-U2 - 405 Hatch Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-421/422-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-423/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-445/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-447/446-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-467/422-4/4-165	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-405/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/405-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-427/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-446/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-467/446-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-427/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/419-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-404/405-97/4-155: 1-155-122-06	0:00, E. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-404/405-97/4-155: 1-155-122-07	0:00, E. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-447/446-98/4-155: 1-155-132-02	0:00, E. of 447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-467/422-4/4-165: 1-155-131-04	0:00, E. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-421/422-92/4-155 461	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/405-4/4-155 409	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-STAIR 8/405-S08/4-155 407	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-446/459-4/39-155 432	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/422-S10/4-155 431	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0405-U2 - 405 Hatch Room

Systems and Features

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0406-U2 - 406 Decontamination Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-136-1	U1-4 Detection System 1A-136-1 Room 406	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-136-1	Preaction Sprinkler System, U1-4, Decon Room, Room 406	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-2406/406-U2-4/U1-4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-406/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-601/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-602/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-406/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2602/406-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-01	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-02	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0406-U2 - 406 Decontamination Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-406/2405-U1-4/U2-4-155 2403	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-406-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0407-U2 - 407 Hot Machine Shop	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A54	Aux.Bldg.-155'-Hot Machine Shop	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A6	Aux. Bldg-155'-Hot Machine Shop	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-4	U1-4 Detection System 1A-107-4 Room 407	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-407/2408-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-603/407-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-405/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/407-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-407/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-407/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2603/407-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-407/2408-U1-4/U2-4-155 2404	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155 2406	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0407-U2 - 407 Hot Machine Shop	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-407-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0408-U2 - 408 Hallway

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-5	U1-4 Detection System 1A-107-5 Room 408	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-57-3	U1-4 Detection System 1A-57-3 Room 409	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-312/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-322/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-323/409-4/4-155	0:00, marshmallows,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-328/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/409-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-602/408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-603/408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-408/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/408-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-215/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-421/408-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-467/408-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0408-U2 - 408 Hallway	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-404/409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-406/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-407/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-01-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-02-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155: 1-155-122-04	0:00, S. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155: 1-155-122-05	0:00, S. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-01	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-02	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-03	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-Elev 2/409-S02/4-155 Elev. No. 2 (5)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155 408	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155 466	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-409-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0409-U2 - 409 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0410A-U2 - 410A 600-V Load Center	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A2	Aux. Bldg-155'-Load Center 1N	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-4	U1-4 Detection System 1A-57-4 Room 410A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-50-1	Local CO2 system in Fire Area 4 , room number 410A, 600V Load Center 1M	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-317/410A-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-402/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0410B-U2 - 410B 600-V Load Center	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-5	U1-4 Detection System 1A-57-5 Room 410B	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-50-2	Local CO2 system in Fire Area 4 , room number 410B, 600V Load Center 1N	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-317/410B-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-403/410B-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0415-U2 - 415 Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0417-U2 - 417 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0418-U2 - 418 Auxiliary Building and Containment Purge Vent Equipment Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-6	U1-4 Detection System 1A-107-6 Room 418	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-114-4	U1-4 Detection System 1A-114-4 Room 415	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-3	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Corridor, Room 415	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-324/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-325/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-326/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/418-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/415-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-400/415-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-418/419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-418/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-415/417-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-418/405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-418/408-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/432-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0418-U2 - 418 Auxiliary Building and Containment Purge Vent Equipment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-415/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-416/415-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-418/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-415/400-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-347/418-35/4-155: 1-139-120-15	0:00, F. of 418	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-418/405-4/4-155 409	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-416/415-4/44-155 418	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/400-4/4-155 419	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-418/409-4/4-155 466	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0419-U2 - 419 Demineralizer Hatch Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0422-U2 - 422 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0423-U2 - 423 Valve Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0424-U2 - 424 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-424/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0425-U2 - 425 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-425/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0426-U2 - 426 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-426/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0427-U2 - 427 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-427/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-427/423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0429-U2 - 429 Containment Purge Air Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A30	Aux. Bldg-155'-Radwaste Vent. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-1	U1-4 Detection System 1A-108-1 Room 429	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-323/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-324/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/429-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-417/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-429/241-4/6-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-429/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-409/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/438-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0429-U2 - 429 Containment Purge Air Equipment Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-334/429-34/4-155: 1-139-119-20	0:00, F. of 429	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-429/CTMT-4/55-155 467	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/429-S02/4-155 447	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-429-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0432-U2 - 432 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A25	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-6	U1-4 Detection System 1A-114-6 Room 432	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-5	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Corridor, Room 432	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-465/432-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/432-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/454-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-432/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0432-U2 - 432 Corridor

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0438-U2 - 438 Hot Water Heater Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-2	U1-4 Detection System 1A-108-2 Room 438	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-1	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' HP Office & Briefing Room Non-Rad, Room 438	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-438/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-438/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/438-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-438/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0438-U2 - 438 Hot Water Heater Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0441-U2 - 441 Tool Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-57-7	U1-4 Detection System 1A-57-7 Room 441	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-441/2406-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-308/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-309/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-310/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-406/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-405/441-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/441-97/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-441/2406-U1-4/U2-4-155 402	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-441-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0445-U2 - 445 Spent-Fuel Pool Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-9	U1-4 Detection System 1A-107-9 Room 445	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-342/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-445/446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-447/445-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-449/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-450/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-420/445-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-421/445-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-448/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-445/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-447/448-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-448/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-447/448-98/4-155: 1-155-132-01	0:00, W. of 447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0445-U2 - 445 Spent-Fuel Pool Heat Exchanger Room

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0446-U2 - 446 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A33	Aux. Bldg-155'-New Fuel Storage Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0448-U2 - 448 SFPC Pump Room	

Extinguishers

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Hose Stations

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Active Fire Protection - Detection

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Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0449-U2 - 449 Demineralizer Room

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-342/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-342/450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-449/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-450/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-449/348-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-450/238-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-448/449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-450/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0450-U2 - 450 Valve Compartment

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0451-U2 - 451 Filter Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-342/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-238/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-451/445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-450/451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-451/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0453-U2 - 453 Clean Janitor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-3	U1-4 Detection System 1A-108-3 Room 453	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-2	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Clean Janitor, Room 453	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/453-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-453/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0453-U2 - 453 Clean Janitor

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0454-U2 - 454 Lobby	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-1	Aux. Bldg- 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-2	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-3	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-4	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-5	Aux. Bldg -155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-6	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-7	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-8	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
FW-9	Aux. Bldg 155'-*Fire Watch Ext Rack Non-Rad Side	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-114-7	U1-4 Detection System 1A-114-7 Room 454	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0454-U2 - 454 Lobby	

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-114-6	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Lobby, Room 454	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-345/454-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/454-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-454/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-454/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/454-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/454-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/454-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-Elev 1/454-S01/4-155 Elev. No. 1 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/454-S01/4-155 439	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-454-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0455-U2 - 455 Clean Toilet Room (Men's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0456-U2 - 456 Drying Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-5	U1-4 Detection System 1A-108-5 Room 456	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-4	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Drying Area, Room 456	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/456-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-455/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-456/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-488/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0456-U2 - 456 Drying Area

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0461-U2 - 461 Dosimetry Lab	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-1	U1-4 Detection System 1A-51-1 Room 461	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-5	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Dosimetry Lab, Room 461	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-249/461-30/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-250/461-31/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/461-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-454/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/461-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-455/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-456/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-461/462-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-491/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0461-U2 - 461 Dosimetry Lab	

Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0462-U2 - 462 Nonradioactive Vent Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A45	Aux. Bldg-155'-Non-Rad Vent. Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-2	U1-4 Detection System 1A-51-2 Room 462	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-51-1	Preaction Sprinkler System, U1-4, Aux Building Elevation 155' Environmental Low Activity Lab & Non-Radioactive Vent Rooms, Room 462	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/462-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-462/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-461/462-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/463-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/462-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/462-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-462/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0462-U2 - 462 Nonradioactive Vent Equipment Room

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0463-U2 - 463 Storage Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-3	U1-4 Detection System 1A-51-3 Room 463	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/463-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-463/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/463-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-463/OUTSIDE-4/YARD-155 443	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0464-U2 - 464 Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A5	Aux. Bldg-155'-N2 Storage Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-4	U1-4 Detection System 1A-51-4 Room 464	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-463/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-464/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/464-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-464/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-464/OUTSIDE-4/YARD-155 442	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0467-U2 - 467 SFP Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-13	U1-4 Detection System 1A-107-13 Room 467	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-422/467-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/467-S10/4-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-467/422-4/4-165	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-467/408-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-467/446-4/4-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-467/421-4/92-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-467/422-4/4-165: 1-155-131-04	0:00, E. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-467/421-4/92-165: 1-155-131-03	0:00, W. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0478-U2 - 478 Motor Control Center Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-14	U1-4 Detection System 1A-107-14 Room 478	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-332/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/478-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-418/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-488/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-438/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-238/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-419/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-420/478-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-445/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-451/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0478-U2 - 478 Motor Control Center Room

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0480-U2 - 480 Health Physics Briefing/Planning Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-6	U1-4 Detection System 1A-108-6 Room 480	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-6	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Health Physics Briefing/Planning Room, Room 480	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/480-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-480/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-432/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-480/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-415/480-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0480-U2 - 480 Health Physics Briefing/Planning Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0481-U2 - 481 Health Physicist Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-7	U1-4 Detection System 1A-108-7 Room 481	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-7	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Health Physicist Room, Room 481	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/481-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-480/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-481/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/481-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-481/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0481-U2 - 481 Health Physicist Room

**Systems and Features**

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0482-U2 - 482 Air Sample & Smear Analysis Rm.	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-8	U1-4 Detection System 1A-108-8 Room 482	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-8	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Air Sample & Smear Analysis Rm., Room 482	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/482-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-481/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/482-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0482-U2 - 482 Air Sample & Smear Analysis Rm.

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0483-U2 - 483 Passage	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-9	U1-4 Detection System 1A-108-9 Room 483	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-9	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Passage, Room 483	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-335/483-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-480/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-481/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-482/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-438/483-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	1-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	0483-U2 - 483 Passage	

Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0484-U2 - 484 Hot Toilet (Women's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-10	U1-4 Detection System 1A-108-10 Room 484	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-10	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Hot Toilet (Women's), Room 484	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-415/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-484/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/484-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0484-U2 - 484 Hot Toilet (Women's)

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0485-U2 - 485 Hot Toilet (Men's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-11	U1-4 Detection System 1A-108-11 Room 485	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-11	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Hot Toilet (Men's), Room 485	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-483/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-438/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-484/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-429/485-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0485-U2 - 485 Hot Toilet (Men's)

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0486-U2 - 486 Survey Preparation Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-12	U1-4 Detection System 1A-108-12 Room 486	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-108-4	U1-4 Detection System 1A-108-4 Room 455	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-12	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' (Survey Preparation Room), Room 486	-	Yes		Yes	-
WS-1A-52B-3	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Clean Toilet Room (Men's), Room 455	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/455-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/486-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-453/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-455/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-486/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-491/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-432/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-455/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/486-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-486/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-455/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0486-U2 - 486 Survey Preparation Room

Systems and Features

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0487-U2 - 487 Instrument Calibration Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-13	U1-4 Detection System 1A-108-13 Room 487	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-13	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Instrument Calibration Room, Room 487	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/487-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-486/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-487/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/487-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0487-U2 - 487 Instrument Calibration Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0488-U2 - 488 Instrument Issue & Storage Rm.	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-14	U1-4 Detection System 1A-108-14 Room 488	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-14	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Instrument Issue & Storage Rm., Room 488	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/488-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-487/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-488/478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-483/488-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-488/456-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Fire Zone ID:** 0488-U2 - 488 Instrument Issue & Storage Rm.

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0489-U2 - 489 Waste & Decon. Foreman Office	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-15	U1-4 Detection System 1A-108-15 Room 489	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-15	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Waste & Decon. Foreman Office, Room 489	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-345/489-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/489-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-432/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-454/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-486/489-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0489-U2 - 489 Waste & Decon. Foreman Office

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0490-U2 - 490 Clean Toilet (Women's)	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-16	U1-4 Detection System 1A-108-16 Room 490	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-16	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Clean Toilet (Women's), Room 490	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/490-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-487/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-490/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-455/490-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0490-U2 - 490 Clean Toilet (Women's)

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0491-U2 - 491 Passage	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-18	U1-4 Detection System 1A-108-18 Room 491	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-114-2	U1-4 Detection System 1A-114-2 Room 491	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-52B-17	Wet Pipe Sprinkler System, U1-4, Aux Building Elevation 155' Passage, Room 491	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-489/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-491/455-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-490/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-491/461-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-453/491-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0491-U2 - 491 Passage

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0504-U2 - 504 Stair No. 6, El. 184'-0"	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-109-1	U1-4 Detection System 1A-109-1 Room 504	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0505-U2 - 505 Spent-Fuel Pool Vent Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A46	Aux. Bldg-184'-SFP Vent Equip. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A47	Aux. Bldg-184'-SFP Vent Equip. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-109-2	U1-4 Detection System 1A-109-2 Room 505	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0506-U2 - 506 Component Cooling Surge Tank Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-110-2	U1-4 Detection System 1A-110-2 Room 506	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0604-U2 - 604 Passage	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-13	U1-4 Detection System 1A-105-13 Room 604	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-231/604-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/604-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/604-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-603/604-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/606-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-STAIR 10/604-S10/4-131 333	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-602/604-93/4-131 329	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-4-AUX BUILDING-604-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0605-U2 - 605 Blowdown Pumps and Surge Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-14	U1-4 Detection System 1A-105-14 Room 605	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-605/421-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-231/605-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-330/605-4/4-139	1:00, , U1 Unrated Barrier at ele 139 between Rooms 330/605 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-351/605-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-605/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-605/609-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-605/208-4/4-121	3:00, , U1 3 Unrated Barrier at ele 121 between Rooms 605/208 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 10/605-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0606-U2 - 606 Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-15	U1-4 Detection System 1A-105-15 Room 606	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-606/607-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-606/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/606-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-606/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-606/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: 0607-U2 - 607 Filter Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-16	U1-4 Detection System 1A-105-16 Room 607	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-606/607-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-607/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-607/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0608-U2 - 608 Blowdown Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-17	U1-4 Detection System 1A-105-17 Room 608	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-341/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-606/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-607/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-608/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-STAIR 10/608-S10/4-131 334	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0609-U2 - 609 Storage Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-18	U1-4 Detection System 1A-105-18 Room 609	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-609/421-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-232/609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-330/609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-605/609-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-609/Stair 10-4/S10-131 335	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0610-U2 - 610 Valve Compartment Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-105-19	U1-4 Detection System 1A-105-19 Room 610	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-606/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-607/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-610/329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-604/610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-610/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-004-U2 - Aux Building  
Fire Zone ID: CHASE-U2 - CHASE

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-152/CHASE (U1)-4/51-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-CHASE (U1)/236-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-CHASE (U1)/184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A / Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b> 1-004-U2 - Aux Building <b>Compliance Basis:</b> NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		<b>Engineering Evaluations</b>
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 7, TE-BE-03-9898-001, Technical Evaluation in Support of GL 86-10 for DCP 03-1-9898, Reroute Appendix R RWST Suction Valve Cables	
<b>Inactive</b>	Yes	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the adequacy of the separation for redundant trains of the RWST suction valves. The valves are not separated in accordance with the requirements of Appendix R, Section III.G.2 in that the area of spatial separation is not provided with whole area suppression.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on spatial separation, location of combustibles, limited in situ combustibles, whole area detection with partial suppression, and fire barriers. In addition, administrative controls have been established to maintain the non-suppressed area free of transient combustibles or to establish compensatory actions.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, DOEJ-SM-03-0415-001 Applicability of NFPA 80 Door Closer Requirements	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation addresses a select number of fire doors that occasionally may not automatically latch closed due to "abnormal air pressure".</p> <p>Bases for Acceptability:</p> <p>The specific fire doors cited are PA101, 201 and 497. The evaluation justifies the door latching deviation by taking credit for plant staff that ensure all fire doors are closed after entry or egress.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

non-compliances identified in the evaluations

- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

1976.

- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have been provided with justifications

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable & combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

### Licensing Action

Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), Enclosure of one train of redundant cable by a 1 hr rated barrier with automatic suppression (III.G.2.c criteria) and separation by 3 hr barrier (III.G.2.a criteria)

### Licensing Basis

Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression and lack of separation of redundant trains by 3 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:

For redundant electrical power distribution system:

- The redundant MCCs 1A and 1B are separated by a 2-ft-thick reinforced concrete floor at el 139 ft - 0 in.
- Unsealed penetrations have been reviewed and will not affect separation.
- Minimum horizontal separation between components is approximately 60 feet with complete automatic suppression coverage at el 121 ft - 0 in.
- The redundant dc distribution panels 1C and 1F are separated by a 2-ft-thick reinforced concrete floor at el 139 ft.
- The minimum horizontal separation between these redundant panels is approximately 40 ft and has complete automatic suppression coverage at el 121 ft - 0 in. and 139 ft - 0 in.
- A smoke detection system is installed in all rooms containing the subject equipment.
- Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on the subject elevations.

For steam generator pressure instrumentation:

- A fire rated barrier has been provided in room 462 for raceways 21E047, 21E048, 31E017, 41E019 and 41E017.
- A fire rated barrier inside the following conduits is provided where they attach to pull boxes located in room 462 -21E045, 21E047, 31E018, 31E020, 41E017, and 41E019.
- Partial suppression system covers the area of modification In the east portion of room 462.
- Unsealed penetrations in the subject wall have been reviewed.
- Approximate 32-ft horizontal separation between redundant steam generator pressure instruments and cabling.
- Smoke detection system in rooms
- Automatic fixed suppression system and the barriers provided for redundant cabling in room 462 would protect the redundant S/G B and C instrumentation.
- A portable extinguisher and manual hose station are available for use in room 464.
- Based upon the modification, the existing raceway barriers, smoke detection, and fixed suppression in the area, a credible fire in room 462 would not affect the ability to monitor S/G A pressure.
- Control room actions can be performed for resetting spurious SI, CVI, or CI safety signals.

For instrument air:

- Redundant cables are separated by a 2-ft-thick reinforced concrete floor at el 121 ft - 0 in. and 139 ft - 0 in.
- Unsealed penetrations in the subject floors have been reviewed and will not affect the separation afforded by the concrete floor.
- Train A cables have full suppression coverage on el 100 ft - 0 in. and el 139 ft - 0 in.
- Train B cables have full suppression coverage on el 121 ft - 0 in.
- Smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations and portable extinguishers are available for use on the subject elevations.

For battery room ventilation:

- The requirement for battery and battery charger room ventilation is a long term requirement.
- Either portable ventilation equipment will be installed in the effected room(s) or
- The damaged ventilation system will be repaired within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Previously Approved Engineering Evaluations

exceed acceptable limits.

For boration/makeup, depressurization, and RCP seal integrity:

- A fire rated barrier has been provided for train-A power cable raceway ADDA21, ADDA18, ADDA15, and ADDA09.
- The existing fire rated barrier on raceway BFDB03 has been extended and a fire rated barrier for raceway BHFA03 is being provided
- An open penetration in floor slab has been sealed.
- Suppression coverage is provided in rooms 163, 162, 161, 160, 175, and 186.
- Redundant power cables are separated by a 2-ft-thick reinforced concrete wall bounding rooms with the exception of room 155, where there is approximately 32 ft of separation.
- Unsealed penetrations have been reviewed and the walls afford adequate separation.
- A smoke detection system is installed in all rooms containing the subject charging pump cabling.
- Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on this elevation.
- EI 100 ft - 0 in. Train-B cables are protected by a fire rated barrier which extends to a point of 40-ft horizontal separation from the redundant train-A cables.
- Automatic fired suppression and smoke detection systems provide coverage for the subject cables.
- EI 121 ft - 0 in. redundant cables have a minimum horizontal separation of approximately 40 ft.
- The train-B power and control cables are provided with automatic suppression and smoke detection coverage
- Redundant train-A and -B charging pump room cooler power and control cables are separated by a 2-ft-thick reinforced concrete slab floor at el 121 ft - 0 in.
- Unsealed penetrations in the floor slab have been reviewed and are considered to afford adequate separation.

For main steam isolation:

- Manual action can be performed to manually trip the TDAFW pump throttle valve Q1N12MOV3406-A.

For steam release (cooldown):

- Manual action can be performed to open or close the atmospheric relief valves.

For neutron flux monitoring:

- Configuration of redundant equipment cables and equipment with respect to barriers would limit the fire to one train of equipment.
- Unsealed penetrations in the subject floor slab have been reviewed and are considered not to affect the separation afforded by the concrete floor.

For reactor coolant boundary integrity:

- Manual action can be performed to remove power from all cables in the shared raceway. This can be accomplished by opening the supply breaker on 125 V-dc switchgear 1A (Q1R42B001A-A) for 125 V-dc distribution panel 1C (Q1R41L001C-A).

For the lack of full area smoke/fire detection:

- All cabling in rooms without detection is routed in conduits.
- There are no combustibles in these rooms.
- There are no functionally redundant safe shutdown cables in these rooms.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-1-9941, DCP 03-1-9926, DCP 03-1-9928, DCP 03-1-9898, and DCP 03-1-9902. Note that raceway 31E020 with Kaowool raceway fire barrier is not addressed in the Kaowool elimination resolution table.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-004-U2 - Aux Building NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For the non-fire rated hatch covers:</p> <ul style="list-style-type: none"> <li>• Suppression system in room 163 in the area of the subject steel hatch cover</li> <li>• Analysis of safe shutdown showed that physical separation was adequate</li> <li>• Detection system provided in rooms 163 and 103</li> <li>• Sprinkler systems in room 345 and 454 will serve the purpose of a water curtain to prevent the passage of fire through the non-rated steel hatch.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li> <li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li> <li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

### Licensing Basis

Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0140-U2	140 Waste Gas Decay Tank Drain Filter Room	—	—	—	—
0151-U2	151 Waste Gas Decay Tank Rooms	—	E, R, S, N	—	<p>Detection System, 1A-102-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-102-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-102-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-151/2151-U1-4/U2-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2151/151-U2-4/U1-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-101/151-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-102/151-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-103/151-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-107/165-90/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-108/166-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/201-4/14-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/202-4/15-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/254-4/12-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-165/210-4/20-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-165/211-4/20-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-165/212-4/16-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-166/211-4/20-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-166/226-4/19-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-152/151-4/4-100:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0152-U2	152 Valve Compartment Room	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-164/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-165/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-166/185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-151/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-164/165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-165/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-166/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-167/166-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-102-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-152/2152-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2152/152-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-103/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-104/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-105/152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/CHASE (U1)-4/51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-152/153-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-164/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-152/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-163/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-154A/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0153-U2	153 Waste Gas Compressor Room	—	E, R, S, N	—	<p>Detection System, 1A-102-3:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>FireBarrier, U0-FNP-N-153/2153-U1-4/U2-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-Ceiling-153/203-4/4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-Ceiling-153/204-4/4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-E-152/153-4/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-E-153/154-4/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-N-154A/153-4/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul>
0154-U2	154 Waste Evaporator Steam Generator Room	E	E, R, D, S, N	—	<p>Detection System, 1A-101-5:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-102-11:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-102-4:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-118-1:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-118-2:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-25-1:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> </ul> <p>Detection System, 1A-25-2:</p>

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-25-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-25-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-154/2154-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-155/2155-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2160/160-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-103/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-105/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-106/164-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-111/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-140/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-155/255-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/204-4/4-121:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-162/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-162/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-163/213-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-163/214-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/212-4/16-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/213-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-177/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-153/154-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-154A/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-155/156-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-164/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-176/177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-154A/153-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-163/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-164/151-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-167/164-94/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-N-169/163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-170/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-172/161-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-173/161-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-179/177-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-184/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-154/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-154A/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-156/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-163/168-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-170/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-154A/152-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-164/165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-170/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-183/162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/160-S08/4-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-118-2: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-25-2: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-25-3: -- EEEE/LA: Required to support a fire area boundary evaluation.
0154A-U2	154A Valve Compartment Room	—	—	—	—
0155-U2	155 Passageway to Unit 2(1)	—	—	—	—
0156-U2	156 Holdup Tank Room	—	E, R, D	—	Detection System, 1A-104-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-N-156/2156-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2156/156-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/301-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-156/315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/156-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/157-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/157-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-156/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-156/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-156/205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0157-U2	157 Holdup Tank Room	—	E, R, D	—	Detection System, 1A-104-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2157/157-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/303-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0158-U2	158 Holdup Tank Room	—	E, R, D	—	FireBarrier, U1-FNP-Ceiling-157/305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/157-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-156/157-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-157/2157-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-104-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2158/158-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-157/158-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-158/2158-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0159-U2	159 Recycle Evaporator Feed Pump Room	—	—	—	FireBarrier, U1-FNP-S-158/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2159/159-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-159/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-159/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0160-U2	160 Hatch Area	—	—	—	FireBarrier, U1-FNP-N-0177/0160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0161-U2	161 Corridor	—	—	—	—
0162-U2	162 Hallway	—	—	—	—
0163-U2	163 WDS Control Panel Room	—	—	—	—
0164-U2	164 Laundry and Hot Shower Tank Room/Storage Room	—	—	—	—
0165-U2	165 Waste Gas Decay Tank Room	—	—	—	—
0166-U2	166 Waste Gas Decay Tank Room	—	—	—	—
0168-U2	168 Chemical and Laundry Drain Tank Room	—	E, R, S, N	—	Detection System, 1A-25-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-109/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-110/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-168/224-4/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-168/225-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-167/168-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-163/168-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-168/185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-169/168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0170-U2	170 Letdown Heat Exchanger Room	—	—	—	FireBarrier, U1-FNP-Ceiling-111/170-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-170/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-170/216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-170/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-170/161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-171/170-95/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-170/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-170/162-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-171/170-95/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-172/170-5/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0175-U2	175 Hallway	—	E, R, D, S, N	—	Detection System, 1A-118-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-175/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/175-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-173/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-174/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-181/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0176-U2	176 Secondary Spent-Resin Storage Tank Room	—	—	—	FireBarrier, U1-FNP-S-175/186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-176/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-176/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-176/177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-160/176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-176/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0177-U2	177 Pump Room	—	—	—	FireBarrier, U1-FNP-N-0177/0160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0178-U2	178 Filter Room	—	E, R, S, N	—	Detection System, 1A-101-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-178/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-179/178-96/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0180-U2	180 Recycle Evaporator Steam Generator Room	—	E, R, S, N	—	Detection System, 1A-101-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-101-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-118-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-180/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/230-4/4-121:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-187/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-172/186-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-175/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-175/186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-176/180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-179/187-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/CTMT-4/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-187/188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-179/180-96/4-100: -- Barrier: Required to support a fire area boundary evaluation.
0186-U2	186 Boric Acid Area	—	—	—	—
0187-U2	187 Hydro Test Pump Room	—	—	—	—
0188-U2	188 Boric Acid Tank Area	—	E, R, S, N	—	Detection System, 1A-103-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-188/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-188/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-188/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0203-U2	203 Waste Condenser Tanks and Pump Room	E	E, R, D, S, N	E, B	<p>FireBarrier, U1-FNP-E-188/OUTSIDE-4/YARD-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-188/232-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-187/188-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-188/238-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-188/237-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Detection System, 1A-103-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-103-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-104-4:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-104-9:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-35-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-35-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-35-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-35-4:  -- EEEE/LA: Required to support an Engineering Evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-35-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-203/2203-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2205/205-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2207/207-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-140/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-153/203-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-162/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-170/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-172/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-173/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-174/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-175/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-176/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-178/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/237-4/4-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-203/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-205/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/175-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/317-34/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-222/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-237/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-203/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-204/205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-207/601-4/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-207/602-4/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-207/602-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-208/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-214/209-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-217/218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-222/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-223/222-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-237/238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-245/209-20/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE1/203-4/51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-216/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-253/2253-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-156/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-157/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-158/209-4/4-121:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-204/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-206/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-218/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/208-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-156/205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-188/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-203/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-204/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-209/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-209/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-216/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-237/CTMT-4/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/208-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Restricted transient controls, U1-4-AUX BUILDING-205-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-207-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-208-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-130-1: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-35-2: -- EEEE/LA: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-204/2204-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-153/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-154A/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-161/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-204/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-203/204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-204/205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-204/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-204/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0204-U2	204 Waste Evaporator Package Room	—	—	—	
0205-U2	205 Passageway to Unit 2	—	—	—	—
0206-U2	206 Heat Exchanger Room	—	E, R, S	—	Detection System, 1A-104-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2206/206-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-159/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-160/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-206/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-158/206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-206/253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-206/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0207-U2	207 Hatch Area	—	—	—	—
0208-U2	208 Corridor	—	—	—	FireBarrier, U1-FNP-W-605/208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0209-U2	209 Hallway	—	—	—	—
0215-U2	215 Duct and Pipe Chase	—	—	—	FireBarrier, U1-FNP-Ceiling-162/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/402-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/215-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/215-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-215/STAIR 2-4/S02-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-209/215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-215/214-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-215/318-4/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-215/417-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0216-U2	216 Valve Compartments Area	—	E, R, S	—	Detection System, 1A-103-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U1-FNP-Ceiling-170/216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-216/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-216/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-216/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-216/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-216/209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0217-U2	217 Volume Control Tank Room	—	—	—	FireBarrier, U1-FNP-Ceiling-170/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-171/217-95/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-217/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-216/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-217/218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-209/217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-217/223-1/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0218-U2	218 Chiller Unit Room	—	—	—	—
0219-U2	219 Pipe Chase	—	—	—	FireBarrier, U1-FNP-E-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-219/602-4/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-208/219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/219-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0220-U2	220 Valve Compartment Room	—	E, R, S, N	—	Detection System, 1A-103-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-177/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-221/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-220/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-220/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0221-U2	221 Primary Spent-Resin Storage Tank Room	—	—	—	FireBarrier, U1-FNP-Ceiling-176/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-221/220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-221/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-220/221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0222-U2	222 Corridor	—	—	—	—
0230-U2	230 Recycle Evaporator Package Room	—	E, R, S, N	—	Detection System, 1A-103-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-175/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-180/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-186/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/340-4/4-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0231-U2	231 Sluice Pump Room	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-222/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-221/230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-230/237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-103-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-179/231-96/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-231/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-231/604-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-231/605-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-220/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-231/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-208/231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
0232-U2	232 Sluice Filter Room	—	E, R, S, N	—	Detection System, 1A-103-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-187/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-230/232-4/4-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0236-U2	236 Duct Chase	—	—	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-232/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-188/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-208/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-231/232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-131/CHASE-1/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/236-6/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-CHASE (U1)/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-236/334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-236/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-250/236-31/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/235-4/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-236/241-4/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-223/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/235-4/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0237-U2	237 Corridor	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0238-U2	238 Cask Storage Area	—	E, R, S, N	—	<p>Detection System, 1A-107-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-107-16:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-107-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-237/238-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-238/332-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-238/OUTSIDE-4/YARD-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-239/349-4/39-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-239/OUTSIDE-4/YARD-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-240/349-4/39-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-240/459-4/39-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-240/OUTSIDE-4/YARD-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-348/446-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-348/459-4/39-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-348/OUTSIDE-4/YARD-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-238/451-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-239/OUTSIDE-4/YARD-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-348/OUTSIDE-4/YARD-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-188/238-4/4-121:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-238/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-447/348-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-448/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-450/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-238/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-349/348-4/39-139: -- Barrier: Required to support a fire area boundary evaluation.
0239-U2	239 Transfer Canal	—	—	—	—
0240-U2	240 Spent-Fuel Pool Room	—	—	—	—
0253-U2	253 Valve Compartment	—	—	—	—
0301-U2	301 Seal Water Filter Room	—	E, R, S, N	—	Detection System, 1A-105-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>Detection System, 1A-105-12:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-105-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-105-3:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-105-4:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-105-8:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-302/2302-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-303/2303-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-304/2304-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-305/2305-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2301/301-U1-4/U2-4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/301-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/302-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/314-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-156/315-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/302-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/303-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-157/305-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-157/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-157/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-158/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-301/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-302/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-303/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-304/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-305/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-311/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-313/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-314/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-315/404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-305/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-307/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-311/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-301/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-315/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0302-U2	302 Recycle Evaporator Feed Filter Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0303-U2	303 Reactor Coolant Filter Room	—	—	—	—
0304-U2	304 Waste Monitor	—	—	—	—
0305-U2	305 Seal Injection Filter Room	—	—	—	—
0306-U2	306 Recycle Evaporator Feed Demineralizer Room	—	—	—	FireBarrier, U0-FNP-N-306/2306-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-306/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-305/306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-306/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-306/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0307-U2	307 Valve Compartment Room	E, R	E, R, D, S, N	E, B	Detection System, 1A-105-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-105-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-48-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 1A-48-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, 1A-48-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- NPO: Required to meet NPO criteria. Detection System, 1A-48-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-48-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-48-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-48-9: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-49-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-316/2316-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-309/2309-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-188/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-205/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-206/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/330-4/4-139:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-221/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-222/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-232/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-237/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-309/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-310/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-312/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-312/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-316/403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-322/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-325/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-327/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-330/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-332/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-332/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-351/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-238/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-307/311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-308/309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-309/601-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-309/602-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-309/602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-312/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-322/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-324/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-325/326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-326/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-327/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-330/609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-332/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-347/332-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-351/605-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE1/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-312/315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-322/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-340/327-4/4-139:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-351/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-306/307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-308/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-309/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-311/312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-322/334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-325/347-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-330/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-331/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-301/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-315/316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-316/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-330/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-351/351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-309-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-316-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0308-U2	308 Waste Condensate and Monitor Tank Demineralizer Room	—	—	—	Restricted transient controls, U1-4-AUX BUILDING-322-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-48-3: -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-N-308/2308-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-207/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-253/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-308/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-308/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-306/308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-308/309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-308/310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0309-U2	309 Hatch Area	—	—	—	—
0310-U2	310 Valve Compartment Room	—	—	—	—
0311-U2	311 Recycle Evaporator Concentrates Filter Room	—	—	—	—
0312-U2	312 Corridor	—	—	—	—
0313-U2	313 Floor Drain and Laundry Tank Filter Room	—	—	—	—
0314-U2	314 Waste Evaporator Feed Filter Room	—	—	—	—
0315-U2	315 Recycle Waste Condenser Filter Room	—	—	—	—
0316-U2	316 Passageway to Unit 2	—	—	—	—
0322-U2	322 Hallway	—	—	—	—
0323-U2	323 Sample Room	—	E, R, S, N	—	Detection System, 1A-49-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-209/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-323/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-323/429-4/4-155:

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0324-U2	324 Primary Chemistry Lab	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-322/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-323/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-323/334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-49-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-209/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-216/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-217/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-323/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-324/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-333/324-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-312/324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0325-U2	325 Counting Room/Spectro-photometer Lab	—	—	—	—
0326-U2	326 Radiochemistry Lab	—	E, R, S, N	—	Detection System, 1A-49-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-326/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-325/326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-326/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/312-4/4-139:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-326/325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-326/347-4/35-139: -- Barrier: Required to support a fire area boundary evaluation.
0327-U2	327 Valve Access Area	—	—	—	—
0328-U2	328 BTR Demineralizer Room	—	—	—	FireBarrier, U1-FNP-Ceiling-328/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-328/602-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-328/602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-328/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-328/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-328/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation.
0329-U2	329 Pipe Tunnel	—	—	—	FireBarrier, U1-FNP-Ceiling-329/422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-329/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-605/329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-610/329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/329-S10/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-602/329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-603/329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0330-U2	330 Chiller Surge Tanks Pump Room	—	—	—	FireBarrier, U1-FNP-E-330/605-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0331-U2	331 Valve Access Area	—	E, R, S, N	—	Detection System, 1A-48-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-188/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-208/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-231/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-232/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-331/420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/331-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-331/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-328/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-331/330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-330/331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-331/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-602/331-93/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0332-U2	332 MCC 1A/2A Area	—	—	—	—
0340-U2	340 Demineralizer Compartment	—	—	—	FireBarrier, U1-FNP-Ceiling-221/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-230/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-340/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-331/340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-340/332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0341-U2	341 Pipe Chase	—	—	—	FireBarrier, U1-FNP-E-341/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0342-U2	342 Spent-Fuel Pool Pump Room	—	E, R, S, N	—	Detection System, 1A-48-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-188/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-332/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-238/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-330/342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
0348-U2	348 Cask Wash Area	—	—	—	—
0351-U2	Chiller Surge Tank Room	—	—	—	—
0400-U2	Primary Access Point	—	E, R, D	E, B	Detection System, 1A-114-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-E-400/415-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-465/400-13/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-466/400-13/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-400/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/400-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Plant staff Training, U1-4-AUX BUILDING-400-Plant staff Training: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0402-U2	402 Passage to Unit 2	—	E, R, S, N	—	<p>Detection System, 1A-114-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-114-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2402/402-U2-4/U1-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-317/402-34/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-318/417-40/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-402/403-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-402/409-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-402/410A-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-417/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-215/402-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-415/417-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-417/401-4/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-215/417-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-402/401-4/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-417/416-4/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>
0403-U2	403 Hot Instrument Shop	—	E, R, S, N	—	<p>Detection System, 1A-57-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-403/2403-U1-4/U2-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-316/403-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-317/403-34/4-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0405-U2	405 Hatch Room	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-402/403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-107-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-57-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-57-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-405/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-306/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-308/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-312/405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-327/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-329/422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-329/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-332/419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>FireBarrier, U1-FNP-Ceiling-422/467-4/4-165:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-348/446-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-404/405-97/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-405/407-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-418/419-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-419/420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-421/422-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-423/OUTSIDE-4/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-445/446-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-446/OUTSIDE-4/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-447/446-98/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-467/422-4/4-165:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-STAIR 10/422-S10/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-405/441-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-418/405-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-424/423-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-STAIR 10/422-S10/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-STAIR 8/405-S08/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-419/478-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-424/423-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-425/423-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-426/423-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-427/446-4/4-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0406-U2	406 Decontamination Room	E	E, R, D, S, N	E, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-446/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-467/446-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-419/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-427/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/419-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-136-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-2406/406-U2-4/U1-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-406/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-601/406-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-602/406-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-406/407-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-406/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-406/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2602/406-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-406-Restricted transient

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0407-U2	407 Hot Machine Shop	—	E, R, D, S, N	E, B	<p>controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-136-1:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 1A-107-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-407/2408-U1-4/U2-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-W-407/2405-U1-4/U2-4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-603/407-93/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-405/407-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-406/407-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-407/OUTSIDE-4/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-407/408-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2603/407-93/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U1-4-AUX BUILDING-407-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 1A-107-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-57-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-312/409-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>
0408-U2	408 Hallway	—	E, R, D, S, N	E, B	<p>Detection System, 1A-107-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-57-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-312/409-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

**Fire Area ID:** 1-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-322/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-323/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-328/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/409-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-602/408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-603/408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-402/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-408/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/408-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-418/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-421/408-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-467/408-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-404/409-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-406/408-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-407/408-4/4-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-404/409-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-418/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-409-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0409-U2	409 Hallway	—	—	—	—
0410A-U2	410A 600-V Load Center	—	E, R, S, N	—	Detection System, 1A-57-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-317/410A-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-402/410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0410B-U2	410B 600-V Load Center	—	E, R, S, N	—	Detection System, 1A-57-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-CEILING-317/410B-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-403/410B-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0415-U2	415 Corridor	—	—	—	—
0417-U2	417 Corridor	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0418-U2	418 Auxiliary Building and Containment Purge Vent Equipment Room	—	E, R, S, N	—	<p>Detection System, 1A-107-6:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-114-4:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-324/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-325/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-326/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-333/418-35/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-333/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-335/415-41/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-347/418-35/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-347/418-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-400/415-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-415/429-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-415/481-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-418/419-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-418/478-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-415/417-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-418/405-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-418/408-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/432-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/480-4/4-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/481-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-416/415-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-418/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/400-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-418/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0419-U2	419 Demineralizer Hatch Area	—	—	—	—
0422-U2	422 Corridor	—	—	—	—
0423-U2	423 Valve Compartment	—	—	—	—
0424-U2	424 Demineralizer Compartment	—	—	—	FireBarrier, U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-424/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0425-U2	425 Demineralizer Compartment	—	—	—	FireBarrier, U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-425/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0426-U2	426 Demineralizer Compartment	—	—	—	FireBarrier, U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-426/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0427-U2	427 Demineralizer Compartment	—	—	—	FireBarrier, U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-427/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-427/423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0429-U2	429 Containment Purge Air Equipment Room	—	E, R, D, S, N	E, B	Detection System, 1A-108-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-323/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-324/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-334/429-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-236/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-415/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-417/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-429/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-429/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0432-U2	432 Corridor	—	E, R, S, N	—	<p>FireBarrier, U1-FNP-S-478/429-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-Elev 2/429-S02/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-STAIR 2/429-S02/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-409/429-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-429/438-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-429/456-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-429/484-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-429/485-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U1-4-AUX BUILDING-429-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 1A-114-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-432/480-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-432/483-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-432/486-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-432/489-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-465/432-13/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-432/480-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-415/432-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-432/454-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-432/486-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-432/OUTSIDE-4/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0438-U2	438 Hot Water Heater Room	—	E, R, S, N	—	Detection System, 1A-108-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-438/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-438/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/438-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-438/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0441-U2	441 Tool Room	—	E, R, D, S	E, B	Detection System, 1A-57-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-N-441/2406-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-308/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-309/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-310/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-406/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-405/441-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-404/441-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-441-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0445-U2	445 Spent-Fuel Pool Heat Exchanger Room	—	E, R, S, N	—	Detection System, 1A-107-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-342/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-445/446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-447/445-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-449/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-450/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-420/445-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-421/445-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-448/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-445/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-447/448-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-448/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0446-U2	446 Hallway	—	—	—	—
0448-U2	448 SFPC Pump Room	—	—	—	—
0449-U2	449 Demineralizer Room	—	—	—	FireBarrier, U1-FNP-Ceiling-342/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-342/450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-449/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-450/445-4/4-155:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-449/348-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-450/238-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-448/449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-450/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0450-U2	450 Valve Compartment	—	—	—	—
0451-U2	451 Filter Room	—	—	—	FireBarrier, U1-FNP-Ceiling-342/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-238/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-451/445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-450/451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-451/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0453-U2	453 Clean Janitor	—	E, R, S, N	—	Detection System, 1A-108-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/453-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-453/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-453/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0454-U2	454 Lobby	E	E, R, D, S, N	E, B	Detection System, 1A-114-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-345/454-42/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/454-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-454/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-454/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/454-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/454-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-432/454-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-4-AUX BUILDING-454-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-114-6: -- EEEE/LA: Required to support a fire area boundary evaluation.
0455-U2	455 Clean Toilet Room (Men's)	—	—	—	—
0456-U2	456 Drying Area	—	E, R, S, N	—	Detection System, 1A-108-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/456-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-455/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-456/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-488/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0461-U2	461 Dosimetry Lab	—	E, R, S, N	—	Detection System, 1A-51-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-249/461-30/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-250/461-31/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/461-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-454/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/461-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-455/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-456/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-461/462-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-491/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0462-U2	462 Nonradioactive Vent Equipment Room	—	E, R, S, N	—	Detection System, 1A-51-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/462-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-462/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-461/462-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/463-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/462-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0463-U2	463 Storage Room	—	E, R, S, N	—	FireBarrier, U1-FNP-S-STAIR 1/462-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-462/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-51-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/463-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-463/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/463-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-51-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-463/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-464/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-464/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.
0464-U2	464 Storage Room	—	E, R, S, N	—	Detection System, 1A-51-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-463/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-464/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/464-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-464/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.
0467-U2	467 SFP Heat Exchanger Room	—	E, R, S, N	—	Detection System, 1A-107-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-422/467-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 10/467-S10/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-467/422-4/4-165:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0478-U2	478 Motor Control Center Room	—	E, R, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-467/408-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-467/446-4/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-467/421-4/92-165: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-107-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-332/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-334/478-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-418/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-488/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-419/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-438/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-238/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-419/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-420/478-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-445/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-451/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0480-U2	480 Health Physics Briefing/Planning Room	—	E, R, S, N	—	Detection System, 1A-108-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-335/480-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-480/481-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-432/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-480/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-415/480-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0481-U2	481 Health Physicist Room	—	E, R, S, N	—	Detection System, 1A-108-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-335/481-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-415/481-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-480/481-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-481/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/481-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-481/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0482-U2	482 Air Sample & Smear Analysis Rm.	—	E, R, S, N	—	Detection System, 1A-108-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-335/482-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-481/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/482-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0483-U2	483 Passage	—	E, R, S, N	—	Detection System, 1A-108-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-335/483-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-483/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-483/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-480/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-481/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-482/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0484-U2	484 Hot Toilet (Women's)	—	E, R, S, N	—	FireBarrier, U1-FNP-W-438/483-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-108-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-483/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-415/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-484/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/484-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0485-U2	485 Hot Toilet (Men's)	—	E, R, S, N	—	Detection System, 1A-108-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-483/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-438/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-484/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-429/485-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0486-U2	486 Survey Preparation Room	—	E, R, S, N	—	Detection System, 1A-108-12: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-108-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/455-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/486-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0487-U2	487 Instrument Calibration Room	—	E, R, S, N	—	FireBarrier, U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-453/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-455/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-486/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-491/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-432/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-455/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/486-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-486/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-455/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-108-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/487-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-486/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-487/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/487-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0488-U2	488 Instrument Issue & Storage Rm.	—	E, R, S, N	—	Detection System, 1A-108-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/488-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-487/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-488/478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-483/488-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-488/456-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0489-U2	489 Waste & Decon. Foreman Office	—	E, R, S, N	—	Detection System, 1A-108-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-345/489-42/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/489-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-432/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-454/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-486/489-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0490-U2	490 Clean Toilet (Women's)	—	E, R, S, N	—	Detection System, 1A-108-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-346/490-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/490-4/4-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0491-U2	491 Passage	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-487/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-490/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-455/490-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-108-18: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-114-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-489/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-491/455-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-453/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-490/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-491/461-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-453/491-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
0504-U2	504 Stair No. 6, El. 184'-0"	—	E, R, S, N	—	Detection System, 1A-109-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0505-U2	505 Spent-Fuel Pool Vent Equipment Room	—	E, R, S, N	—	FireBarrier, U1-FNP-W-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-109-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.
0506-U2	506 Component Cooling Surge Tank Room	—	E, R, S, N	—	Detection System, 1A-110-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.
0604-U2	604 Passage	—	E, R, D, S, N	E, B	Detection System, 1A-105-13: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-231/604-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/604-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-602/604-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-603/604-93/4-131: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0605-U2	605 Blowdown Pumps and Surge Tank Room	—	E, R, S, N	—	<p>FireBarrier, U1-FNP-S-604/606-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-604/610-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U1-4-AUX BUILDING-604-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 1A-105-14:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-605/421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-231/605-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-330/605-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-351/605-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-605/329-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-605/609-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-605/208-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-STAIR 10/605-S10/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p>
0606-U2	606 Filter Room	—	E, R, S, N	—	<p>Detection System, 1A-105-15:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-E-606/607-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-606/610-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-604/606-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-606/608-4/4-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-606/Stair 10-4/S10-131:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0607-U2	607 Filter Room	—	E, R, S, N	—	Detection System, 1A-105-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-606/607-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-607/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-607/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation.
0608-U2	608 Blowdown Heat Exchanger Room	—	E, R, S, N	—	Detection System, 1A-105-17: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-341/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-606/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-607/608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 10/608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-608/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation.
0609-U2	609 Storage Room	—	E, R, S, N	—	Detection System, 1A-105-18: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-609/421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-232/609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-330/609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/608-4/4-131:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0610-U2	610 Valve Compartment Room	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-605/609-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 1A-105-19: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-610/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-606/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-607/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-610/329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-604/610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-610/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation.
CHASE-U2	CHASE	—	—	—	FireBarrier, U1-FNP-Ceiling-152/CHASE (U1)-4/51-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-CHASE (U1)/236-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-CHASE (U1)/184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-005 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0172	172 Hallway	
0173	173 Charging/Safety Injection Pump Room	
0174	174 Charging/Safety Injection Pump Room	
0181	181 Charging/Safety Injection Pump Room	
0182	182 Contaminated Storage Area	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0172 - 172 Hallway	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-118-4	U1-5 Detection System 1A-118-4 Room 172	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-4	Preaction Sprinkler System, U1-5, Aux Building Elevation 100' Charging Pump Hallway, Room 172	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-172/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-172/186-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-172/161-5/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-172/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-181/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/171-5/95-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/182-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-173/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-174/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-181/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-02	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-03	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-04	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-172/223-5/1-121: 1-121-117-05	0:00, F. of 223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0172 - 172 Hallway	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-172/161-5/4-100 155	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/171-5/95-100 191	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-174/172-5/5-100 161	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-181/172-5/5-100 162	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAFDG15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHDB15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-5-AUX BUILDING-172-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0173 - 173 Charging/Safety Injection Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-3	U1-5 Detection System 1A-101-3 Room 173	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-173/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-173/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-173/161-5/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-173/174-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-173/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-173/174-5/5-100 160	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAFDG15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHDB15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0174 - 174 Charging/Safety Injection Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-4	U1-5 Detection System 1A-101-4 Room 174	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-174/218-5/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-174/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-181/174-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-173/174-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-174/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-173/174-5/5-100 160	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-174/172-5/5-100 161	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAFDG15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHDB15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0181 - 181 Charging/Safety Injection Pump Room	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-8	U1-5 Detection System 1A-101-8 Room 181	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-181/223-5/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-181/175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-181/174-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-181/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-181/172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-181/172-5/5-100 162	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAEDA15	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAEF037	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAFD-33	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAFDG15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHD096	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHD188	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHDB15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHF025	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHF027	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHF089	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHF094	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHF097	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHFA18	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Systems and Features</b>				
<b>Fire Zone ID:</b>	0181 - 181 Charging/Safety Injection Pump Room					

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAHG051	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAIDB18	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VNHF006	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VNHL597	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 1-005 - Aux Building  
Fire Zone ID: 0182 - 182 Contaminated Storage Area

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-101-9	U1-5 Detection System 1A-101-9 Room 182	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-183/182-1/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-171/182-95/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-182/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/182-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-005 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by stopping the reactor makeup water pumps to prevent boron dilution and by charging borated water from the RWST using Train A charging pump.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-005 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1A. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored in the Control Room. 6. SG Level - Steam Generator 1A/1B/1C level is monitored in the Control Room.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by {off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-005 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-005 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-34), Unit-1 Aux. Building, EI 100 ft (Fire Area 1-005), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria) and 3 hour fire barrier (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, and lack of 3 hour rated fire barrier between redundant trains, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For physical separation of the charging pumps:</p> <ul style="list-style-type: none"> <li>• The pump rooms are watertight with 2-ft thick reinforced concrete walls.</li> <li>• Penetrations in the pump room walls are sealed to provide a watertight boundary</li> <li>• Lubricating oil and cable insulation are the only combustibles present in the pump rooms. Lubricating oil would be contained within the individual rooms or would drain into the sump servicing the room.</li> <li>• Fixed suppression system is installed in the hallway.</li> <li>• Smoke detection systems are installed throughout the area including the three charging pump rooms.</li> <li>• The maximum fire severity in these rooms due to in-situ loading is estimated to be less than 1 hour.</li> <li>• The penetrations that are sealed have been included into the penetration seal surveillance program.</li> </ul> <p>For RWST isolation valves:</p> <ul style="list-style-type: none"> <li>• A fire barrier has been provided for the portions of raceway sections AHFA15, AHF031, AHDB12, AFD-30, AEF028 that carry cables for RWST isolation valve LCV115B-A in room 172.</li> </ul> <p>For reactor coolant boundary integrity:</p> <ul style="list-style-type: none"> <li>• A fire barrier has been provided for raceway section AHDB12 to protect cables for the subject reactor coolant boundary integrity valves in all portions of Fire Area 1-005 with the exception of room 181.</li> <li>• For a fire in room 181, manual operator actions can be performed to regain control of the transfer relays associated with the PORVs and the reactor head vent valves.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-1-9898, DCP 03-1-9907, DCP 03-1-9898, and DCP 03-1-9941.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li> <li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li> <li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

		Previously Approved Engineering Evaluations
<b>Fire Area ID:</b>	1-005 - Aux Building	
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

**Fire Area ID:** 1-005 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to wrap trays 1VAFDG15 and 1VAHDB15 with 1 hr fire rated wrap to prevent from fire damage to 1A Charging Pump and to replace trip device in panel Q1R42B0001A, breaker LA20.
0172	172 Hallway	E, D	E, R, D, S, N	E, R, B	Detection System, 1A-118-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 1VAFDG15: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHDB15: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-172/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-172/223-5/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-172/186-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-172/161-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-172/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-181/172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-172/170-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-172/171-5/95-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-172/182-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-173/172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-174/172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-181/172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-5-AUX BUILDING-172-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-118-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0173	173 Charging/Safety Injection Pump Room	—	E, R, D, S, N	R, B	Detection System, 1A-101-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 1VAFDG15: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHDB15: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-173/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-173/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-173/161-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-173/174-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-173/172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation.
0174	174 Charging/Safety Injection Pump Room	—	E, R, D, S, N	R, B	Detection System, 1A-101-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 1VAFDG15: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHDB15: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-174/218-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-174/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-181/174-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-173/174-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-174/172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0181	181 Charging/Safety Injection Pump Room	—	E, R, D, S, N	R, B	Detection System, 1A-101-8: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 1VAEDA15: -- Risk: Required to meet Risk criteria. ERFBS, 1VAEF037: -- Risk: Required to meet Risk criteria. ERFBS, 1VAFD-33: -- Risk: Required to meet Risk criteria. ERFBS, 1VAFDG15: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHD096: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHD188: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHDB15: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHF025: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHF027: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHF089: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHF094: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHF097: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHFA18: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHG051: -- Risk: Required to meet Risk criteria. ERFBS, 1VAIDB18: -- Risk: Required to meet Risk criteria. ERFBS, 1VNHF006: -- Risk: Required to meet Risk criteria. ERFBS, 1VNHL597: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-181/223-5/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-181/175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-181/174-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-181/172-5/5-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0182	182 Contaminated Storage Area	—	E, R, S, N	—	<ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> <li>FireBarrier, U1-FNP-W-181/172-5/5-100:</li> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> <li>Detection System, 1A-101-9:</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> <li>FireBarrier, U1-FNP-E-183/182-1/5-100:</li> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> <li>FireBarrier, U1-FNP-S-171/182-95/5-100:</li> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> <li>FireBarrier, U1-FNP-S-182/CTMT-5/55-100:</li> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> <li>FireBarrier, U1-FNP-W-172/182-5/5-100:</li> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0185	185 Component Cooling Water Heat Exchanger Room	
0189	189 Plant Heating Equipment Room	
0190	190 Motor Control Center 1E Room	
0191	191 Auxiliary Feedwater Pump Room	
0192	192 Auxiliary Feedwater Pump Room	
0193	193 Auxiliary Feedwater Pump Room	
0194	194 Equipment Room	
0195	195 Access Hatch Room	
0199	199 Phosphate Tank and Pump Area	
0241	241 Main Steam and Feedwater Valve Room	
0242	242 Pipe Chase	
0243	243 Pipe Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0185 - 185 Component Cooling Water Heat Exchanger Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A15	Aux. Bldg-100'-Comp. Cool. Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A15-1	Aux. Bldg-100'-Comp. Cool. Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D108	Hose Station - N1V43D108-FZ 6 Room 185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-27-2	U1-6 Detection System 1A-27-2 Room 185	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes
Heat Detectors-1	U1-6 Detection System Heat Detectors-1 Room 185	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-27-1	Local CO2 system in Fire Area 6 , room number 185, 5 KV Disconnect Switch 1A (CCW Pump 1B)	-	-		-	-
GS-1A-27-2	Local CO2 system in Fire Area 6 , room number 185, 5 KV Disconnect Swtich 1B (CCW Pump 1B)	-	-		-	-
WS-1A-119-1	Preaction Sprinkler System, U1-6, Aux Building Elevation 100' North West Corner of CCW Pump Room, Room 185	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
WS-1A-27-1	Preaction Sprinkler System, U1-6, Aux Building Elevation 100' CCW Heat Exchanger and Pump Room, Room 185	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-0122/0185-1/6-100	3:00, , U1 3 hr. Rated Barrier at ele 83 between Rooms 122/185 and fire areas 1/6	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-118/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-119/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-120/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-128/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-129/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-130/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-131/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-185/116-6/8-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Fire Zone ID:** 0185 - 185 Component Cooling Water Heat Exchanger Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/117-6/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/228-6/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/229-6/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/233-6/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/234-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/236-6/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/246-6/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/249-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/250-6/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-166/185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-167/185-94/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-168/185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-185/189-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-185/190-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/185-8/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/185-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-123/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-184/185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE (U1)/185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-167/185-94/6-100: 1-100-113-01	0:00, N. of 185	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-167/185-94/6-100: 1-100-113-04	0:00, N. of 185	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-STAIR 1/185-S01/6-100 169	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/185-S01/6-100 Elev. No. 1 (1)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-167/185-94/6-100 166	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/185-8/6-100 165	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/185-9/6-100 167	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Fire Zone ID:** 0185 - 185 Component Cooling Water Heat Exchanger Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-6-AUX BUILDING-185-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0189 - 189 Plant Heating Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D107	Hose Station - N1V43D107-FZ 6 Room 189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-10	U1-6 Detection System 1A-102-10 Room 193	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-62-1	U1-6 Detection System 1A-62-1 Room 189	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-62-2	U1-6 Detection System 1A-62-2 Room 190	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-62-6	U1-6 Detection System 1A-62-6 Room 194	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-62-1	Preaction Sprinkler System, U1-6, Aux Building Elevation 100' Plant Heating Equip Room, Room 189	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1A-62-2	Preaction Sprinkler System, U1-6, Aux Building Elevation 100' Aux Feedwater Pumps, Room 190	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-189/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-190/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-193/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-194/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-195/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-189/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-191/190-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-192/193-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-194/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Fire Zone ID:** 0189 - 189 Plant Heating Equipment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-251/195-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-189/249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-190/249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-190/STAIR 1-6/S01-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-193/191-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-195/241-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-195/241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-195/241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-185/189-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-185/190-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-193/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-194/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-250/189-31/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-190/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-191/190-6/6-100 174	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-192/193-6/6-100 176	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/190-S01/6-100 170	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-6-AUX BUILDING-190-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Fire Zone ID:** 0190 - 190 Motor Control Center 1E Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A15	Aux. Bldg-100'-Comp. Cool. Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A15-1	Aux. Bldg-100'-Comp. Cool. Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D107	Hose Station - N1V43D107-FZ 6 Room 189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D108	Hose Station - N1V43D108-FZ 6 Room 185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D125	Hose Station - N1V43D125-FZ 20 Room 234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

—

#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0191 - 191 Auxiliary Feedwater Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-8	U1-6 Detection System 1A-102-8 Room 191	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-62-3	U1-6 Detection System 1A-62-3 Room 191	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-191/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-191/190-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-191/199-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-192/191-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-193/191-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-191/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-191/190-6/6-100 174	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0192 - 192 Auxiliary Feedwater Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-102-9	U1-6 Detection System 1A-102-9 Room 192	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-192/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-192/193-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-192/191-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-192/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-192/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-192/193-6/6-100 176	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-006 - Aux Building  
Fire Zone ID: 0193 - 193 Auxiliary Feedwater Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D107	Hose Station - N1V43D107-FZ 6 Room 189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	1-006 - Aux Building	Systems and Features
Fire Zone ID:	0194 - 194 Equipment Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D107	Hose Station - N1V43D107-FZ 6 Room 189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-006 - Aux Building	Systems and Features
Fire Zone ID:	0195 - 195 Access Hatch Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

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Fire Dampers

—

Fire Doors

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Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0199 - 199 Phosphate Tank and Pump Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-62-7	U1-6 Detection System 1A-62-7 Room 199	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-199/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-191/199-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-199/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-6-AUX BUILDING-199-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Fire Zone ID:** 0241 - 241 Main Steam and Feedwater Valve Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-106-1	U1-6 Detection System 1A-106-1 Room 241	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-189/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-190/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-191/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-192/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-193/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-194/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-199/241-4/4-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-241/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-241/CTMT-6/55-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-241/CTMT-6/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-462/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-464/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-195/241-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-195/241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-195/241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-241/249-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-241/STAIR 1-6/S01-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-251/241-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-252/241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-223/241-1/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-236/241-4/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-249/241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-249/241-30/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-250/241-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0241 - 241 Main Steam and Feedwater Valve Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-429/241-4/6-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-462/241-4/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/241-S01/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/241-S01/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Stair 1/241-S01/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/241-S01/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-Stair 1/241-S01/6-127 330	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-006 - Aux Building  
Fire Zone ID: 0242 - 242 Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-242/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-242/462-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-242/243-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-242/243-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 1-006 - Aux Building  
Fire Zone ID: 0243 - 243 Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-243/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-243/463-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-242/243-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-242/243-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-243/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with aux spray for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Performance-based approach ensure decay heat removal using either the MDAFW or TDAFW pumps. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 1A.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, 1039993101 Reroute 4KV Train B Power Cable for Component Cooling Water Pump 1A
<b>Inactive</b>	Yes
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of this evaluation is to evaluate the horizontal spatial separation between Train A and B Component Cooling Water (CCW) pumps/raceways.</p> <p>Bases for Acceptability:</p> <p>The spatial separation provided between the Train A and B pump/raceways was evaluated to provide an adequate level of separation based on the limited in situ combustibles, the full area detection and automatic suppression, the lack of significant fire hazards, and the imposition of administrative controls.</p>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 1-006 - Aux Building		Previously Approved Engineering Evaluations
<b>Compliance Basis:</b> Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach		
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies separating rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li><li>• The sprinkler system in room 234 will serve as a water curtain to prevent the passage of a fire through the non-rated steel hatches. Sprinkler systems in the hatch area above and below room 234 will prevent the spread of fire from these areas into Fire Area 1-020.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-38), Unit 1 Auxiliary Building, Elevations 100, 127, 139, 155, and 175 ft. (Fire Area 1-006), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of 20 feet horizontal distance separation between safe shutdown circuits with no intervening combustibles, with fire detection and automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For AFW pump rooms:</p> <ul style="list-style-type: none"><li>• A fire barrier has been provided for the train-B motor driven auxiliary feedwater pump cables with the exception of the train-B pump room (192). The subject raceways are BDDA09, BDDA06, BDDA03, BDDA0A, BEE016, and BFDD0M.</li><li>• Watertight room construction for the Train B pump.</li><li>• Low quantity of combustible material with a maximum fire severity of less than one hour.</li><li>• A smoke detection system in the AFW pump room.</li><li>• The availability of equipment for use by the fire brigade.</li></ul> <p>For CCW pump and heat exchanger rooms:</p> <ul style="list-style-type: none"><li>• A smoke detection system and automatic fire suppression system is installed throughout the area.</li><li>• Low quantity of combustible material with a maximum fire severity of less than 30 minutes.</li><li>• The availability of equipment for use by the fire brigade.</li><li>• Heat detectors are provided in the 5-kV CCW pump disconnect switch; 5-kV disconnect switch cabinets are provided with a total-flooding Carbon Dioxide system.</li><li>• The CCW pump cables are wrapped with two 1-in. layers of Kaowool with the exception of the train-A cables for the swing CCW pump which are wrapped with a single 1-in. layer.</li><li>• Cables for the train-B service water inlet and discharge valves on the CCW heat exchangers are protected by two 1-in. layers of Kaowool and covered by automatic suppression.</li><li>• Redundant service water valves are separated by a distance of approximately 10 ft. with minimal intervening combustibles consisting primarily of cable insulation.</li></ul> <p>For main steam valve room:</p> <ul style="list-style-type: none"><li>• Adequate degree of separation is provided between MSARVs, main steam and bypass isolation valves, and AFW flow control valves and their associated</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-006 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	Previously Approved Engineering Evaluations
	<ul style="list-style-type: none"><li>control cabling in room 241.</li><li>• Minimum combustible loading.</li><li>• A smoke detection system is installed in the room.</li><li>• Administrative controls are imposed at the plant to limit access to room 241 during plant operations.</li><li>• Manual actions can be performed to manually open or close the atmospheric relief valves.</li></ul> <p>Although not specifically addressed in APC and NRC correspondence for this exemption request, the FSAR provided the following justification for the lack of full area smoke detection coverage in this fire area:</p> <ul style="list-style-type: none"><li>• For rooms without detection, cables in one room are routed in conduits with no in-situ combustible materials or redundant safe shutdown functions.</li><li>• Other 2 rooms do not contain any safe shutdown equipment, raceways or combustible materials.</li></ul> <p>Elimination of the reliance on Kaowool raceway fire barriers for the CCW system in this area is resolved by DCP 03-1-9931, DCP 03-1-9941, and DCP 03-1-9934. For the Train B motor driven auxiliary feedwater pump raceways that are protected with Kaowool in this area, (BDDA09, BDDA06, BDDA03, BDDA0A, BEE016, and BFDD0M), no documentation was found regarding a resolution to eliminate reliance on this Kaowool.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-38), Unit 1 Auxiliary Building, Elevations 100, 127, 139, 155, and 175 ft. (Fire Area 1-006), lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of a rated 3 hour boundary between fire areas 1-020 and 1-006, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The sprinkler system installed in rooms 234 and 185 serves the purpose of a water curtain to prevent the spread of fire via the hatchway.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-38), Unit 1 Auxiliary Building, Elevations 100, 127, 139, 155, and 175 ft. (Fire Area 1-006), lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of a rated 3 hour boundary between fire areas 1-006 and 1-S01, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>A non fire-rated, watertight door # 170 exists between fire area 1-006, room 190 and fire area 1-S01, Stairwell # 1; and a non fire-rated, pressure tight door # 330 exists between fire area 1-006, room 241 and fire area 1-S01, Stairwell # 1.</p> <ul style="list-style-type: none"><li>• These doors are normally maintained closed.</li><li>• Smoke detection is provided in rooms on both sides of these doors. These system alarms locally and are annunciated in the main control room and will provide early warning of a pending fire condition, prompting a fire brigade response.</li><li>• An automatic fire suppression system is provided in room 190.</li><li>• Portable extinguishers and fire hose cabinets are available outside of the stairwell # 1 at each elevation except 175 feet for fire brigade's use.</li><li>• The combustible loading in room 241 (main steam valve room) is less than 30 minutes and access to this area during plant operation is restricted. Based on the configuration and fire protection provided, a fire on either side of these doors will not propagate to the adjacent fire area.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-006 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
	This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	Modifications: -- DID: Modification required to plumb air from emergency air compressor header to AFW flow control valve. -- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA20; Q1R42B0001B, breaker LB14.
0185	185 Component Cooling Water Heat Exchanger Room	E, D	E, R, D, S, N	E, B	Detection System, 1A-27-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, Heat Detectors-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-CEILING-0122/0185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-118/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-119/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-120/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-128/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-129/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-130/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-131/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/116-6/8-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/117-6/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/228-6/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/229-6/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/233-6/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/234-6/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/235-6/23-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-185/236-6/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/246-6/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/249-6/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/250-6/31-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-166/185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-167/185-94/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-168/185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-185/189-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-185/190-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/185-8/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-117/185-9/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-123/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-184/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE (U1)/185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-6-AUX BUILDING-185-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-119-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-27-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0189	189 Plant Heating Equipment Room	E, D	E, R, D, S, N	E, B	<p>Detection System, 1A-102-10:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-62-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-62-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-62-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-189/241-4/4-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-190/241-4/4-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-193/241-4/4-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-194/241-4/4-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-195/OUTSIDE-6/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-189/CTMT-6/55-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-191/190-6/6-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-192/193-6/6-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-194/CTMT-6/55-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-251/195-31/6-127:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-N-189/249-6/30-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-190/249-6/30-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-190/STAIR 1-6/S01-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-193/191-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-195/241-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-195/241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-195/241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-185/189-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-185/190-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-193/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-194/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-250/189-31/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/190-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/190-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-190/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-6-AUX BUILDING-190-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-62-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1A-62-2: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0190	190 Motor Control Center 1E Room	—	—	—	— -- EEEE/LA: Required to support a fire area boundary evaluation.
0191	191 Auxiliary Feedwater Pump Room	—	E, R, D, S, N	—	Detection System, 1A-102-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-62-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-191/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-191/190-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-191/199-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-192/191-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-193/191-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-191/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation.
0192	192 Auxiliary Feedwater Pump Room	—	E, R, S, N	—	Detection System, 1A-102-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-192/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-192/193-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-192/191-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation.
0193	193 Auxiliary Feedwater Pump Room	—	—	—	—
0194	194 Equipment Room	—	—	—	—
0195	195 Access Hatch Room	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0199	199 Phosphate Tank and Pump Area	—	E, R, D	E, B	Curbs, U1-6-AUX BUILDING-199-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 1A-62-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-199/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-191/199-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-199/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation.
0241	241 Main Steam and Feedwater Valve Room	—	E, R, D, S, N	—	Detection System, 1A-106-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-189/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-190/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-191/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-192/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-193/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-194/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-199/241-4/4-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-241/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-241/CTMT-6/55-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-241/CTMT-6/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-006 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-462/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-464/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-195/241-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-195/241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-195/241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-241/249-6/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-241/STAIR 1-6/S01-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-251/241-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-252/241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-223/241-1/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-236/241-4/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-249/241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-249/241-30/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-250/241-31/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-429/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-462/241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/241-S01/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/241-S01/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Stair 1/241-S01/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/241-S01/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-241/OUTSIDE-6/YARD-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0242	242 Pipe Chase	—	—	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-242/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-242/462-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-242/243-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-242/243-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.
0243	243 Pipe Chase	—	—	—	FireBarrier, U1-FNP-Ceiling-243/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-243/463-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-242/243-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-242/243-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-243/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-008-U1 - Aux Building Cable Chase, Room 116

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0116-U1	116 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U1 - Aux Building Cable Chase, Room 116	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0116-U1 - 116 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-53-1	U1-8 Detection System 1A-53-1 Room 116	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-53-1	Preaction Sprinkler System, U1-8, Vertical Cable Chase, Room 116	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/116-6/8-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/125-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/184-8/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/223-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/334-8/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/110-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/224-8/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-117/116-9/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-169/116-1/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/120-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/185-8/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-008-U1 - Aux Building Cable Chase, Room 116  
**Fire Zone ID:** 0116-U1 - 116 Cable Chase

### Systems and Features

#### Fire Dampers

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#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-116/185-8/6-100 165	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/335-8/41-139 319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-8-AUX BUILDING-116-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-008-U1 - Aux Building Cable Chase, Room 116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train B PORV evaluated in FRE for loss of instrument air for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Performance-based approach ensure that adequate shutdown margin is achieved.2.RCS Pressure - RCS pressure is monitored in the Control Room.3.Pressurizer Level - Pressurizer level is monitored by PZR level CH 3.4.RCS Temperature - Performance-based approach ensures that adequate RCS Loop 1/Loop 2/Loop 3 temperature monitoring is available.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored in the Control Room.6.SG Level - Steam Generator 1A/1B/1C level is monitored in the Control Room.	
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by diesel generator EDG-1B.2.4.16 kV and 600 V power is supplied by Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 1-008-U1 - Aux Building Cable Chase, Room 116

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U1 - Aux Building Cable Chase, Room 116	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Penetration Seals #24-100-32; 09-139-9; and 02-139-29	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of this evaluation is to document the acceptability of FNP Unit 1 Penetration Seals #24-100-32, 09-139-9, and 02-139-29 as 3-hour rated fire barriers.</p> <p>Bases for Acceptability:</p> <p>The evaluation demonstrates that the penetrations have been evaluated as acceptable 3-hour rated penetrations based on the features of construction as compared to test results furnished by various recognized industry tests.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	

## Fire Safety Analysis

**Fire Area ID:** 1-008-U1 - Aux Building Cable Chase, Room 116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

Fire Area ID: 1-008-U1 - Aux Building Cable Chase, Room 116 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-14), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-008), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-20), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-008), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U1 - Aux Building Cable Chase, Room 116	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
0116-U1	116 Cable Chase	E, D	E, R, D, S, N	E, B	Detection System, 1A-53-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-185/116-6/8-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/125-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/184-8/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/223-8/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/334-8/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/110-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/224-8/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/318-8/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-117/116-9/8-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-116/117-8/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-116/117-8/9-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-116/117-8/9-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-169/116-1/8-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/120-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/185-8/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/229-8/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/335-8/41-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-8-AUX BUILDING-116-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-53-1: -- DID: Required to meet DID criteria.

Fire Safety Analysis

Fire Area ID:	1-008-U1 - Aux Building Cable Chase, Room 116	Required Systems and Features
Compliance Basis:	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
-- EEEE/LA: Required to support a fire area boundary evaluation.					



## Fire Safety Analysis

**Fire Area ID:** 1-008-U2 - Aux Building Cable Chase, Room 116

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0116-U2	116 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U2 - Aux Building Cable Chase, Room 116	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0116-U2 - 116 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-53-1	U1-8 Detection System 1A-53-1 Room 116	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-53-1	Preaction Sprinkler System, U1-8, Vertical Cable Chase, Room 116	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/116-6/8-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/125-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/184-8/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/223-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/334-8/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/110-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/224-8/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-117/116-9/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-169/116-1/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/120-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/185-8/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-008-U2 - Aux Building Cable Chase, Room 116  
**Fire Zone ID:** 0116-U2 - 116 Cable Chase

### Systems and Features

#### Fire Dampers

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#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-116/185-8/6-100 165	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/335-8/41-139 319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-8-AUX BUILDING-116-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-8-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-008-U2 - Aux Building Cable Chase, Room 116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-008-U2 - Aux Building Cable Chase, Room 116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by {off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U2 - Aux Building Cable Chase, Room 116	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Penetration Seals #24-100-32; 09-139-9; and 02-139-29	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of this evaluation is to document the acceptability of FNP Unit 1 Penetration Seals #24-100-32, 09-139-9, and 02-139-29 as 3-hour rated fire barriers.</p> <p>Bases for Acceptability:</p> <p>The evaluation demonstrates that the penetrations have been evaluated as acceptable 3-hour rated penetrations based on the features of construction as compared to test results furnished by various recognized industry tests.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	

## Fire Safety Analysis

**Fire Area ID:** 1-008-U2 - Aux Building Cable Chase, Room 116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

### Summary

Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

## Fire Safety Analysis

Fire Area ID: 1-008-U2 - Aux Building Cable Chase, Room 116 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-14), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-008), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-20), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-008), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U2 - Aux Building Cable Chase, Room 116	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
0116-U2	116 Cable Chase	E, D	E, R, D, S, N	E, R, B	Detection System, 1A-53-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-185/116-6/8-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/125-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/184-8/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/223-8/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-116/334-8/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/110-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/224-8/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/318-8/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-117/116-9/8-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-116/117-8/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-116/117-8/9-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-116/117-8/9-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-169/116-1/8-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/120-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/185-8/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/229-8/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/335-8/41-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-8-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-8-AUX BUILDING-116-Restricted transient controls:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-008-U2 - Aux Building Cable Chase, Room 116	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-53-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0117-U1	117 Cable Chase	
0246-U1	246 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0117-U1 - 117 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-55-1	U1-9 Detection System 1A-55-1 Room 117	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-55-1	Preaction Sprinkler System, U1-9, Vertical Cable Chase, Room 117	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-123/117-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/117-6/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/125-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/184-9/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/334-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-117/116-9/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-117/123-9/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-117/123-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-117/121-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/185-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0117-U1 - 117 Cable Chase	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-117/185-9/6-100 167	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139 324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-9-AUX BUILDING-117-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U1-9-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246  
**Fire Zone ID:** 0246-U1 - 246 Cable Chase

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-55-2	U1-9 Detection System 1A-55-2 Room 246	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-55-2	Preaction Sprinkler System, U1-9, Vertical Cable Chase, Room 246	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-123/246-1/9-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-123/246-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/246-6/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-246/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-246/334-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0246-U1 - 246 Cable Chase	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-246/343-9/41-139 325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-9-AUX BUILDING-246-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-
U1-9-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV and block valve are evaluated in the FRE. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1.Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2.2.RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2 and RCS wide range pressure for Loop 3.3.Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2.4.RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs.5.SG Pressure - Steam Generator 1A/1B/1C pressure is monitored in the Control Room.6.SG Level - Steam Generator 1A/1B level is monitored in the Control Room.	
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by diesel generator EDG1-2A.2.4.16 kV and 600 V power is supplied by Train A distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A equipment.	



## Fire Safety Analysis

**Fire Area ID:** 1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-31), Unit 1 Train-B Inside Cable Chases, Auxiliary Building (Fire Area 1-009), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer PORVs and assure CCW to the 1B heat exchanger when it is aligned and operating as the train-A heat exchanger.</li> <li>• Multiple hot shorts can be mitigated by removing 125 V-dc power from cables in the shared raceway. This can be accomplished by opening the breaker on 125 V-dc switchgear bus 1B (Q1R42B001B-B) for 125 V-dc distribution panels 1D, 1E, and 1F. In the interim, alternate charging flow is available to keep up with the spurious letdown.</li> <li>• One train of control cables associated with one of the auxiliary feedwater isolation valves is enclosed in a one-hour equivalent fire barrier.</li> </ul> <p>Note that SNC correspondence regarding the elimination of the reliance on Kaowool does not address the fire barrier in this fire area.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-34), Unit 1 Train B Inside Cable Chase, Auxiliary Building (Fire Area 1-009 Unit 2 Cabling), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985, APC letter to the NRC, provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0117-U1	117 Cable Chase	E, R, D	E, R, D, S, N	E, R, D, B	<p>Detection System, 1A-55-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-123/117-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-185/117-6/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/125-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/184-9/1-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/334-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-117/116-9/8-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-116/117-8/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-116/117-8/9-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-116/117-8/9-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-117/123-9/1-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-117/123-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/121-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/185-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/335-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-9-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-9-AUX BUILDING-117-Restricted transient</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U1 - Aux Building Cable Chase, Rooms 117 & 246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0246-U1	246 Cable Chase	R, D	E, R, S, N	R, D, B	<p>controls:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-55-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-55-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-123/246-1/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-123/246-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-185/246-6/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-246/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-246/334-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/233-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/334-9/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/343-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-246/229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-246/233-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-246/335-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-246/343-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-9-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-9-AUX BUILDING-246-Restricted transient controls:</p> <p>-- DID: Required to meet DID criteria.</p> <p>Water Suppression, WS-1A-55-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0117-U2	117 Cable Chase	
0246-U2	246 Cable Chase	

## Fire Safety Analysis

**Fire Area ID:** 1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246  
**Fire Zone ID:** 0117-U2 - 117 Cable Chase

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-55-1	U1-9 Detection System 1A-55-1 Room 117	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-55-1	Preaction Sprinkler System, U1-9, Vertical Cable Chase, Room 117	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-123/117-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/117-6/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/125-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/184-9/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/334-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-117/116-9/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-116/117-8/9-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-117/123-9/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-117/123-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-117/121-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/185-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246  
**Fire Zone ID:** 0117-U2 - 117 Cable Chase

### Systems and Features

#### Fire Dampers

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#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-117/185-9/6-100 167	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139 324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-9-AUX BUILDING-117-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246  
**Fire Zone ID:** 0246-U2 - 246 Cable Chase

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-55-2	U1-9 Detection System 1A-55-2 Room 246	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-55-2	Preaction Sprinkler System, U1-9, Vertical Cable Chase, Room 246	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-123/246-1/9-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-123/246-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/246-6/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-246/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-246/334-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246	Systems and Features
Fire Zone ID:	0246-U2 - 246 Cable Chase	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-246/343-9/41-139 325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-31), Unit 1 Train-B Inside Cable Chases, Auxiliary Building (Fire Area 1-009), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer PORVs and assure CCW to the 1B heat exchanger when it is aligned and operating as the train-A heat exchanger.</li> <li>• Multiple hot shorts can be mitigated by removing 125 V-dc power from cables in the shared raceway. This can be accomplished by opening the breaker on 125 V-dc switchgear bus 1B (Q1R42B001B-B) for 125 V-dc distribution panels 1D, 1E, and 1F. In the interim, alternate charging flow is available to keep up with the spurious letdown.</li> <li>• One train of control cables associated with one of the auxiliary feedwater isolation valves is enclosed in a one-hour equivalent fire barrier.</li> </ul> <p>Note that SNC correspondence regarding the elimination of the reliance on Kaowool does not address the fire barrier in this fire area.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-34), Unit 1 Train B Inside Cable Chase, Auxiliary Building (Fire Area 1-009 Unit 2 Cabling), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985, APC letter to the NRC, provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0117-U2	117 Cable Chase	E, R	E, R, D, S, N	E, B	<p>Detection System, 1A-55-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-123/117-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-185/117-6/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/125-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/184-9/1-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/334-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-117/116-9/8-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-116/117-8/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-116/117-8/9-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-116/117-8/9-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-117/123-9/1-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-117/123-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/121-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/185-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/335-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U1-9-AUX BUILDING-117-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-55-1:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-009-U2 - Aux Building Cable Chase, Rooms 117 & 246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0246-U2	246 Cable Chase	R	E, R, S, N	—	Detection System, 1A-55-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-123/246-1/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-123/246-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/246-6/9-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-246/223-9/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-246/334-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/223-9/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/334-9/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/229-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-55-2: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0254	254 Hallway/Local Hot Shutdown Panel Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-012 - Hallway & Local Hot Shutdown Panel Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0254 - 254 Hallway/Local Hot Shutdown Panel Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-10	U1-12 Detection System 1A-104-10 Room 254	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-254/2254-U1-12/U2-12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/254-4/12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-254/318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-254/201-12/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-244/254-20/12-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-254/210-12/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-254/227-12/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-254/2254-U1-12/U2-12-121 201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-254/210-12/20-121 209	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VBFB-C4A	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHFF06	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHFF09	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-012 - Hallway & Local Hot Shutdown Panel Room  
**Fire Zone ID:** 0254 - 254 Hallway/Local Hot Shutdown Panel Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-12-AUX BUILDING-254-Plant staff Training	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-12-AUX BUILDING-254-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U1-12-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Performance-based approach to isolate normal letdown using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using an one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV valve and Train B block valve. The RCS to RHR high/low pressure interface is isolated using the Train A and Train B RHR inboard isolation valve and Train A and Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using either the containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Performance-based approach for positive control of RCS pressure is accomplished with for pressure reduction to ensure Train A/Train B PORV or aux spray and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Performance-based approach for decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump or TDAFW pump supplying Steam Generator 1B or 1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-012 - Hallway & Local Hot Shutdown Panel Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>

<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Farley Nuclear Plant Unit 1 Fire Penetration Seals #45-121-26
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to document the evaluation of the acceptability of FNP Unit 1 Penetration Seal #45-121-26 which contains multiple penetrants, including copper tubing, as both a 3-hour rated fire barrier and an airtight seal.</p> <p>Bases for Acceptability:</p> <p>The copper tubing within penetration seal #45-121-26 does not invalidate the barrier because the copper lines will not:</p> <ul style="list-style-type: none"><li>• melt in an assumed design basis fire,</li><li>• fail at the penetration seal due to over-pressurization;</li><li>• fail the fire barrier due to the loss of a soldered joint; or</li><li>• fail the fire barrier due to thermal expansion.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-012 - Hallway & Local Hot Shutdown Panel Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, DOEJ-SM-03-0415-001    Applicability of NFPA 80 Door Closer Requirements
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation addresses a select number of fire doors that occasionally may not automatically latch closed due to "abnormal air pressure".</p> <p>Bases for Acceptability:</p> <p>The specific fire doors cited are PA101, 201 and 497. The evaluation justifies the door latching deviation by taking credit for plant staff that ensure all fire doors are closed after entry or egress.</p>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M    Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-012 - Hallway & Local Hot Shutdown Panel Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	
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<b>Licensing Action</b>	Appendix R Exemption (No. 1-32), Unit 1 Auxiliary Building Local Hot Shutdown Panel Room (Fire Area 1-012), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of the transfer relays for the PORVs, reactor head vent valves and the main steam isolation valves, control of instrument and control of a main steam atmospheric relief valve.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
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<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

**Fire Area ID:** 1-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to install incipient detection and wrap cable 1VBFB-C4A with 1 hr fire rated wrap and replace trip device in panel Q1R42B0001A, breakers LA13, LA20; Q1R42B0001B, breaker LB14.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0254	254 Hallway/Local Hot Shutdown Panel Room	—	E, R, D, S, N	E, R, D, B	<p>Detection System, 1A-104-10:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 1VBFB-C4A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VBHFF06:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VBHFF09:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-N-254/2254-U1-12/U2-12-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-151/254-4/12-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-254/318-12/40-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-254/201-12/14-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-244/254-20/12-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-254/210-12/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-254/227-12/13-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Plant staff Training, U1-12-AUX BUILDING-254-Plant staff Training:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-12-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-12-AUX BUILDING-254-Restricted transient controls:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0227-U1	227 Vertical Cable Chase, El. 128'-0"	
0300-U1	300 Vertical Cable Chase, El 141 ft 0 in.	
0465-U1	465 Vertical Cable Chase, El. 155'-0"	
0466-U1	466 Vertical Cable Chase, El. 155'-0"	
0500-U1	500 Vertical Cable Chase, El. 168'-6"	

## Fire Safety Analysis

**Fire Area ID:** 1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0227-U1 - 227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-23-1	U1-13 Detection System 1A-23-1 Room 227	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-23-2	U1-13 Detection System 1A-23-2 Room 300	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria. -- rr: Required to meet RR criteria.	Yes	-
1A-23-3	U1-13 Detection System 1A-23-3 Room 465	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-23-5	U1-4 Detection System 1A-23-5 Room 466	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-23-1	Preaction Sprinkler System, U1-13, Aux Building Elevation 121' Vertical Cable Chase, Room 227	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the use of MI cable.	Yes	-
WS-1A-23-2	Preaction Sprinkler System, U1-13, Aux Building Elevation 139' Vertical Cable Chase, Room 300	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the use of MI cable.	Yes	Yes
WS-1A-23-3	Preaction Sprinkler System, U1-13, Aux Building Elevation 155' Vertical Cable Chase, Room 465	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
WS-1A-23-4	Preaction Sprinkler System, U1-13, Aux Building Elevation 155' Vertical Cable Chase, Room 466	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-300/2300-U1-13/U2-13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2227/227-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-465/432-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-466/416-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Floor-300/227-13/13-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0227-U1 - 227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-465/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-466/474-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-466/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-211/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-228/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-234/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-244/227-20/13-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-254/227-12/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-339/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-476/466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Floor-300/227-13/13-139: 1-139-118-06	0:00, F. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Floor-300/227-13/13-139: 1-139-119-05	0:00, F. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139: 1-139-118-04	0:00, E. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-465/400-13/4-155 456	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139 313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 457	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 497	0:00,	-	Yes		Yes	-
U1-FNP-W-466/105-13/YARD-155 498	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-13-AUX BUILDING-227-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-13-AUX BUILDING-300-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0300-U1 - 300 Vertical Cable Chase, EI 141 ft 0 in.

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0465-U1 - 465 Vertical Cable Chase, El. 155'-0"	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	Systems and Features
Fire Zone ID:	0466-U1 - 466 Vertical Cable Chase, El. 155'-0"	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0500-U1 - 500 Vertical Cable Chase, El. 168'-6"	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-23-4	U1-13 Detection System 1A-23-4 Room 500	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-23-5	Preaction Sprinkler System, U1-13, Aux Building Elevation 168' Vertical Cable Chase, Room 500	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2500/500-U2-13/U1-13-174	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-500/2500-U1-13/U2-13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-501/500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: 1-175-125-03-1	0:00, F. of Roof (Outside)	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: 1-175-125-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

Fire Safety Analysis

Fire Area ID:	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	Systems and Features
Fire Zone ID:	0500-U1 - 500 Vertical Cable Chase, El. 168'-6"	

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by performance-based approach for isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV valve and Train B PORV valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump, swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valves remain closed and performance-based approach for normal spray valve and the Loop 1 and Loop 2 RCPs. Undesired pressure increase is prevented by performance-based approach to deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1B. Main feed is isolated using performance-based approach to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Performance-based approach for Steam Generator 1B pressure monitoring. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied using performance-based approach by diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Performance-based approach Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system location of equipment being above water collection area in chase. There are no drains in the electrical chase, but all water would collect below the cable trays. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Farley Nuclear Plant Unit 1 Fire Penetration Seals #45-121-26	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to document the evaluation of the acceptability of FNP Unit 1 Penetration Seal #45-121-26 which contains multiple penetrants, including copper tubing, as both a 3-hour rated fire barrier and an airtight seal.</p> <p>Bases for Acceptability:</p> <p>The copper tubing within penetration seal #45-121-26 does not invalidate the barrier because the copper lines will not:</p> <ul style="list-style-type: none"> <li>• melt in an assumed design basis fire,</li> <li>• fail at the penetration seal due to over-pressurization;</li> <li>• fail the fire barrier due to the loss of a soldered joint; or</li> <li>• fail the fire barrier due to thermal expansion.</li> </ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

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<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C
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<b>Inactive</b>	Yes
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.

Bases for Acceptability:

## Fire Safety Analysis

**Fire Area ID:** 1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on

- full area detection and suppression;
- limited fire hazards;
- an assessment of in situ combustibles; and
- the substantial construction of the fire area boundary.

To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.



## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-16), Unit 1 Auxiliary Building Vertical Cable Chase (Fire Area 1-013), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the transfer relays for the PORVs, reactor head vent valves and the main steam isolation valves, control of instrument and control of a main steam atmospheric relief valve.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>Elimination of the reliance on Kaowool fire barriers in this fire area is resolved by DCP 03-1-9901, DCP 03-1-9902, and DCP 03-1-9941. However, note that APC correspondence and NRC SER regarding this exemption request do not take credit for Kaowool fire barriers.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):</p> <ul style="list-style-type: none"> <li>• The MI cable support span is within the fire test configurations.</li> <li>• The materials for the MI cable supports are bounded by the fire test configurations.</li> <li>• The MI cable installation hardware is in accordance with the fire test configurations.</li> <li>• The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.</li> <li>• The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.

- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and replace trip device in panel Q1R42B0001A, breaker LA13</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0227-U1	227 Vertical Cable Chase, El. 128'-0"	R, D, S	E, R, S, N, rr	R, S, B	<p>Detection System, 1A-23-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>-- Rad. Release: Required to meet RR criteria.</p> <p>Detection System, 1A-23-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>-- Rad. Release: Required to meet RR criteria.</p> <p>Detection System, 1A-23-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-23-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-300/2300-U1-13/U2-13-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2227/227-U2-4/U1-4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-465/432-13/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-466/416-13/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Floor-300/227-13/13-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-465/400-13/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-466/474-13/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-227/OUTSIDE-13/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-300/OUTSIDE-13/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-465/OUTSIDE-13/YARD-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-466/400-13/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-211/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-228/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-234/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-244/227-20/13-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-254/227-12/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-319/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-339/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-465/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/105-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-476/466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U1-13-AUX BUILDING-227-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. One Hour Rated Cable, U1-13-AUX BUILDING-300-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. Procedures/Recovery Actions, U1-13-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-23-1: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-1A-23-2: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-1A-23-3: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-23-4: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U1 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0300-U1	300 Vertical Cable Chase, EI 141 ft 0 in.	—	—	R	Procedures/Recovery Actions, U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0465-U1	465 Vertical Cable Chase, EI. 155'-0"	—	—	R	Procedures/Recovery Actions, U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0466-U1	466 Vertical Cable Chase, EI. 155'-0"	—	—	R	Procedures/Recovery Actions, U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
0500-U1	500 Vertical Cable Chase, EI. 168'-6"	R, D	E, R, S, N	R, B	Detection System, 1A-23-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2500/500-U2-13/U1-13-174: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-500/2500-U1-13/U2-13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-501/500-51/13-175: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-13-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-23-5: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0227-U2	227 Vertical Cable Chase, El. 128'-0"	
0300-U2	300 Vertical Cable Chase, El 141 ft 0 in.	
0465-U2	465 Vertical Cable Chase, El. 155'-0"	
0466-U2	466 Vertical Cable Chase, El. 155'-0"	
0500-U2	500 Vertical Cable Chase, El. 168'-6"	

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0227-U2 - 227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-23-1	U1-13 Detection System 1A-23-1 Room 227	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-23-2	U1-13 Detection System 1A-23-2 Room 300	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria. -- rr: Required to meet RR criteria.	Yes	-
1A-23-3	U1-13 Detection System 1A-23-3 Room 465	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-23-5	U1-4 Detection System 1A-23-5 Room 466	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-23-1	Preaction Sprinkler System, U1-13, Aux Building Elevation 121' Vertical Cable Chase, Room 227	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
WS-1A-23-2	Preaction Sprinkler System, U1-13, Aux Building Elevation 139' Vertical Cable Chase, Room 300	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes
WS-1A-23-3	Preaction Sprinkler System, U1-13, Aux Building Elevation 155' Vertical Cable Chase, Room 465	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
WS-1A-23-4	Preaction Sprinkler System, U1-13, Aux Building Elevation 155' Vertical Cable Chase, Room 466	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-300/2300-U1-13/U2-13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2227/227-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-465/432-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-466/416-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Floor-300/227-13/13-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0227-U2 - 227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-465/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-466/474-13/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-466/400-13/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-211/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-228/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-234/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-244/227-20/13-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-254/227-12/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-339/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-476/466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Floor-300/227-13/13-139: 1-139-118-06	0:00, F. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Floor-300/227-13/13-139: 1-139-119-05	0:00, F. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139: 1-139-118-04	0:00, E. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-465/400-13/4-155 456	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139 313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 457	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/105-13/YARD-155 497	0:00,	-	Yes		Yes	-
U1-FNP-W-466/105-13/YARD-155 498	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-13-AUX BUILDING-227-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-13-AUX BUILDING-300-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	Systems and Features
Fire Zone ID:	0300-U2 - 300 Vertical Cable Chase, El 141 ft 0 in.	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0465-U2 - 465 Vertical Cable Chase, El. 155'-0"

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Fire Zone ID:** 0466-U2 - 466 Vertical Cable Chase, El. 155'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0500-U2 - 500 Vertical Cable Chase, El. 168'-6"	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-23-4	U1-13 Detection System 1A-23-4 Room 500	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-23-5	Preaction Sprinkler System, U1-13, Aux Building Elevation 168' Vertical Cable Chase, Room 500	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2500/500-U2-13/U1-13-174	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-500/2500-U1-13/U2-13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-501/500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: 1-175-125-03-1	0:00, F. of Roof (Outside)	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: 1-175-125-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

Fire Safety Analysis

Fire Area ID:	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	Systems and Features
Fire Zone ID:	0500-U2 - 500 Vertical Cable Chase, El. 168'-6"	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system location of equipment being above water collection area in chase. There are no drains in the electrical chase, but all water would collect below the cable trays. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>

<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>

<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Farley Nuclear Plant Unit 1 Fire Penetration Seals #45-121-26
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to document the evaluation of the acceptability of FNP Unit 1 Penetration Seal #45-121-26 which contains multiple penetrants, including copper tubing, as both a 3-hour rated fire barrier and an airtight seal.</p> <p>Bases for Acceptability:</p> <p>The copper tubing within penetration seal #45-121-26 does not invalidate the barrier because the copper lines will not:</p> <ul style="list-style-type: none"><li>• melt in an assumed design basis fire,</li><li>• fail at the penetration seal due to over-pressurization;</li><li>• fail the fire barrier due to the loss of a soldered joint; or</li><li>• fail the fire barrier due to thermal expansion.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

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<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C
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<b>Inactive</b>	Yes
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.

Bases for Acceptability:

## Fire Safety Analysis

**Fire Area ID:**

1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500

**Engineering Evaluations**

**Compliance Basis:**

NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on

- full area detection and suppression;
- limited fire hazards;
- an assessment of in situ combustibles; and
- the substantial construction of the fire area boundary.

To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-16), Unit 1 Auxiliary Building Vertical Cable Chase (Fire Area 1-013), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the transfer relays for the PORVs, reactor head vent valves and the main steam isolation valves, control of instrument and control of a main steam atmospheric relief valve.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>Elimination of the reliance on Kaowool fire barriers in this fire area is resolved by DCP 03-1-9901, DCP 03-1-9902, and DCP 03-1-9941. However, note that APC correspondence and NRC SER regarding this exemption request do not take credit for Kaowool fire barriers.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):</p> <ul style="list-style-type: none"> <li>• The MI cable support span is within the fire test configurations.</li> <li>• The materials for the MI cable supports are bounded by the fire test configurations.</li> <li>• The MI cable installation hardware is in accordance with the fire test configurations.</li> <li>• The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.</li> <li>• The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.

- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0227-U2	227 Vertical Cable Chase, El. 128'-0"	R	E, R, S, N, rr	R, S, B	<p>Detection System, 1A-23-1:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> <li>-- Rad. Release: Required to meet RR criteria.</li> </ul> <p>Detection System, 1A-23-2:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> <li>-- Rad. Release: Required to meet RR criteria.</li> </ul> <p>Detection System, 1A-23-3:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-23-5:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>FireBarrier, U0-FNP-N-300/2300-U1-13/U2-13-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U0-FNP-S-2227/227-U2-4/U1-4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-E-465/432-13/4-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-E-466/416-13/44-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-Floor-300/227-13/13-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-N-465/400-13/4-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-N-466/474-13/44-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-S-227/OUTSIDE-13/YARD-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-S-300/OUTSIDE-13/YARD-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-S-465/OUTSIDE-13/YARD-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-S-466/400-13/4-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-W-211/227-20/13-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-W-227/OUTSIDE-13/YARD-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U1-FNP-W-228/227-20/13-121:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-234/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-244/227-20/13-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-254/227-12/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-319/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-339/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-465/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/105-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-476/466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U1-13-AUX BUILDING-227-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. One Hour Rated Cable, U1-13-AUX BUILDING-300-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. Water Suppression, WS-1A-23-1: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-23-2: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-23-3: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-23-4: -- Risk: Required to meet Risk criteria.
0300-U2	300 Vertical Cable Chase, EI 141 ft 0 in.	—	—	—	—
0465-U2	465 Vertical Cable Chase, EI. 155'-0"	—	—	—	—
0466-U2	466 Vertical Cable Chase, EI. 155'-0"	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-013-U2 - Aux Building Cable Chase, Rooms 227, 300, 465, 466, & 500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0500-U2	500 Vertical Cable Chase, El. 168'-6"	R	E, R, S, N	—	<p>Detection System, 1A-23-4:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2500/500-U2-13/U1-13-174:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-500/OUTSIDE-13/YARD-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-500/2500-U1-13/U2-13-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-500/OUTSIDE-13/YARD-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-500/OUTSIDE-13/YARD-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-501/500-51/13-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-23-5:</p> <p>-- Risk: Required to meet Risk criteria.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-014 - Computer Room & Duct Chase	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
0201	201 Computer Room	
0255	255 Duct Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-014 - Computer Room & Duct Chase	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0201 - 201 Computer Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-33-0	U1-14 Detection System 1A-33-0 Room 201	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-33-1	Halon Flooding Suppression system in Fire Area 14 , room number 201, Computer Room	-	Yes	-- E: Required to meet EEEE criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2201/201-U2-4/U1-14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/201-4/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-201/318-14/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-254/201-12/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-210/201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-201/210-14/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2201/201-U2-4/U1-14-121: 1-121-115-06	0:00, S. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2201/201-U2-4/U1-14-121: 1-121-115-09	0:00, N. of 201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121: 1-121-115-05	0:00, W. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121: 1-121-115-07	0:00, E. of 201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121: 1-121-115-08	0:00, W. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-201/210-14/20-121 208	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-014 - Computer Room & Duct Chase	Systems and Features
Fire Zone ID:	0201 - 201 Computer Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

Fire Area ID: 1-014 - Computer Room & Duct Chase  
Fire Zone ID: 0255 - 255 Duct Chase

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-155/255-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-014 - Computer Room & Duct Chase  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A/Train B charging pump or swing charging pump aligned to Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A/Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV valve and Train B PORV valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with performance-based approach aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-014 - Computer Room & Duct Chase  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1. 2. RCS Pressure - RCS pressure is monitored. 3. Pressurizer Level - Pressurizer level is monitored. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-014 - Computer Room & Duct Chase	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C	Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li> <li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-014 - Computer Room & Duct Chase	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-014 - Computer Room & Duct Chase	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0201	201 Computer Room	E	E, R, D	—	Detection System, 1A-33-0: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2201/201-U2-4/U1-14-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-151/201-4/14-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-201/318-14/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-201/202-14/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-254/201-12/14-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-210/201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-201/210-14/20-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-33-1: -- EEEE/LA: Required to meet EEEE criteria.
0255	255 Duct Chase	—	—	—	FireBarrier, U1-FNP-Ceiling-155/255-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-015 - Communication Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
0202	202 Communication Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-015 - Communication Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0202 - 202 Communication Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-34-0	U1-15 Detection System 1A-34-0 Room 202	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-34-1	Halon Flooding Suppression system in Fire Area 15 , room number 202, Communications Room (contains HSP)	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2202/202-U2-4/U1-15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-151/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-152/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-202/318-15/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-245/202-20/15-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-203/202-4/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-CHASE1/202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2202/202-U2-4/U1-15-121: 1-121-115-13	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2202/202-U2-4/U1-15-121: 1-121-115-14	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121: 1-121-115-05	0:00, W. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121: 1-121-115-07	0:00, E. of 201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-201/202-14/15-121: 1-121-115-08	0:00, W. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-15	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-16	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-38	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-39	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CHASE1/202-51/15-121: 1-121-115-11	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-015 - Communication Room	<b>Systems and Features</b>				
<b>Fire Zone ID:</b>	0202 - 202 Communication Room					

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-CHASE1/202-51/15-121: 1-121-115-12	0:00, N. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-202/210-15/20-121 207	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-15-AUX BUILDING-202-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-015 - Communication Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B block valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-015 - Communication Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/CH 3. 4. RCS Temperature - RCS Loop 1 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-015 - Communication Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-015 - Communication Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"><li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li><li>• Refinement of field judgments through review of design drawing/documentation; or</li><li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li><li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-015 - Communication Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-015 - Communication Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-015 - Communication Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 1-015 - Communication Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q1R42B0001B, breaker LB14.
0202	202 Communication Room	E, R, D	E, R, D, S, N	E, B	Detection System, 1A-34-0: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2202/202-U2-4/U1-15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-151/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-152/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-202/318-15/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-201/202-14/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-245/202-20/15-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-202/210-15/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE1/202-51/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-203/202-4/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE1/202-51/15-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-34-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-15-AUX BUILDING-202-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0212	212 Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-016 - Aux Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0212 - 212 Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-32-1	U1-16 Detection System 1A-32-1 Room 212	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-164/212-4/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/212-4/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-212/244-16/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-212/213-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-212/210-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-212/226-16/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-212/211-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-212/244-16/20-131: 1-121-115-40	0:00, F. of 244	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-212/213-16/20-121: 1-121-115-42	0:00, E. of 212	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-212/213-16/20-121 210	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-16-AUX BUILDING-212-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored. 3. Pressurizer Level - Pressurizer level is monitored. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

**Licensing Action** Appendix R Exemption (No. 1-28), Unit 1 Auxiliary Building Battery Room Train B (Fire Area 1-016), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)

**Licensing Basis** Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:

- Manual operator actions can be performed to regain control of the pressurizer PORVs and the transfer relays for the PORVs and the head vent valves.
- Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.

This exemption is no longer required because the FNP nuclear safety capability assessment, SE-C051326701-010, has found that the fire area is compliant with NFPA 805 Section 4.2.3.

**Licensing Action** Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

**Licensing Basis** Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 1-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0212	212 Battery Room	—	E, R, D	E, B	<p>Detection System, 1A-32-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-164/212-4/16-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-165/212-4/16-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-212/244-16/20-131:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-212/213-16/20-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-212/210-16/20-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-212/226-16/19-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-212/211-16/20-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U1-16-AUX BUILDING-212-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

Fire Safety Analysis

Fire Area ID:	1-017 - Aux Building Battery Room	Fire Area Definition
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
0214	214 Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-017 - Aux Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0214 - 214 Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-32-3	U1-17 Detection System 1A-32-3 Room 214	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-163/214-4/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-214/245-17/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-214/209-4/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-214/210-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-224/214-18/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-214/213-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/214-4/17-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-214/245-17/20-131: 1-121-127-02	0:00, F. of 245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-224/214-18/17-121: 1-121-115-28	0:00, N. of 224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-224/214-18/17-121: 1-121-115-29	0:00, N. of 224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-214/213-17/20-121: 1-121-115-43	0:00, W. of 214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-214/213-17/20-121 211	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-017 - Aux Building Battery Room  
**Fire Zone ID:** 0214 - 214 Battery Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-17-AUX BUILDING-214-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-017 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-017 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored. 3. Pressurizer Level - Pressurizer level is monitored. 4. RCS Temperature - RCS Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-017 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-017 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-017 - Aux Building Battery Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-20), Unit 1 Aux Building Train-A Battery Room (Fire Area 1-017), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the FNP nuclear safety capability assessment, SE-C051326701-010, has found that the fire area is compliant with NFPA 805 Section 4.2.3.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 1-017 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0214	214 Battery Room	—	E, R, D	E, B	Detection System, 1A-32-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-163/214-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-214/245-17/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-214/209-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-214/210-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-224/214-18/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-214/213-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-215/214-4/17-121: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-17-AUX BUILDING-214-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-018 - Aux Building DC Switchgear Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
0224	224 dc Switchgear Room	

## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room  
**Fire Zone ID:** 0224 - 224 dc Switchgear Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-32-4	U1-18 Detection System 1A-32-4 Room 224	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-168/224-4/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-169/224-1/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-224/318-18/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-224/223-18/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/224-8/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-224/214-18/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-245/224-20/18-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-224/225-18/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-STAIR 2/224-S02/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-224/214-18/17-121: 1-121-115-28	0:00, N. of 224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-224/214-18/17-121: 1-121-115-29	0:00, N. of 224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121: 1-121-115-24	0:00, N. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121: 1-121-115-25	0:00, N. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-245/224-20/18-131: 1-121-115-21	0:00, S. of 245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-245/224-20/18-131: 1-121-115-22	0:00, S. of 245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-224/225-18/20-121: 1-121-115-27	0:00, E. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-224/225-18/20-121: 1-121-115-35	0:00, E. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-224/225-18/20-121 215	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room  
**Fire Zone ID:** 0224 - 224 dc Switchgear Room

### Systems and Features

#### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAHD247	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAL5130A	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAL5130E	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAL5131A	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAL5132A	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAQ5003A	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAQ5004A	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VXL5070A	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>• Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.</li> <li>• Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>• Unit 1: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>• Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>• Unit 1: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>• Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>• Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.</li> <li>• Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range CH 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level CH 3. 4. RCS Temperature - RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-018 - Aux Building DC Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-018 - Aux Building DC Switchgear Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-21), Unit 1 Train-A DC Switchgear Room, Auxiliary Building EI 121 ft (Fire Area 1-018), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 1-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to wrap conduit 1VAHD247 with 1 hr fire rated wrap to prevent from fire damage due to HGL and also provide fuse or other electrical isolation device at the DC shunt connection point.</p>
0224	224 dc Switchgear Room	—	E, R, S, N	R, B	<p>Detection System, 1A-32-4:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 1VAHD247:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAL5130A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAL5130E:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAL5131A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAL5132A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAQ5003A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAQ5004A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VXL5070A:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-168/224-4/18-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-169/224-1/18-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-224/318-18/40-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-224/223-18/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-116/224-8/18-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-224/214-18/17-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-224/229-18/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-245/224-20/18-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-224/225-18/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-STAIR 2/224-S02/18-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-019 - Aux Building DC Switchgear Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
0226	226 dc Switchgear Room	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-019 - Aux Building DC Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0226 - 226 dc Switchgear Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-32-6	U1-19 Detection System 1A-32-6 Room 226	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-166/226-4/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-167/226-94/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-226/318-19/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-226/225-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-212/226-16/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-226/229-19/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-244/226-20/19-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-226/211-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-226/225-19/20-121: 1-121-115-26	0:00, W. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-226/225-19/20-121: 1-121-115-34	0:00, W. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-244/226-20/19-131: 1-121-115-32	0:00, N. of 226	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-244/226-20/19-131: 1-121-115-33	0:00, N. of 226	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-226/225-19/20-121 217	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-226/211-19/20-121 218	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VC5007C	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VXL5006C	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-019 - Aux Building DC Switchgear Room  
**Fire Zone ID:** 0226 - 226 dc Switchgear Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-19-AUX BUILDING-226-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-19-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A/1B. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"><li>• Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li><li>• Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li></ul>	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-019 - Aux Building DC Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

		Previously Approved Engineering Evaluations
<b>Fire Area ID:</b>	1-019 - Aux Building DC Switchgear Room	
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-27), Unit 1 Train-B DC Switchgear Room, Auxiliary Building, EI 121 ft (Fire Area 1-019), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of the pressurizer power operated relief valves (PORVs).</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-019 - Aux Building DC Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0226	226 dc Switchgear Room	—	E, R, D, S, N	E, R, B	<p>Detection System, 1A-32-6:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VC5007C:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VXL5006C:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-166/226-4/19-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-167/226-94/19-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-226/318-19/40-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-226/225-19/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-212/226-16/19-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-226/229-19/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-244/226-20/19-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-226/211-19/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-19-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-19-AUX BUILDING-226-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0210	210 Corridor	
0211	211 Corridor	
0213	213 Battery Service Room	
0225	225 Battery Charger Room	
0228	228 Corridor	
0234	234 Hallway	
0244	244 Roof of Battery 1B Room, El. 131'-0"	
0245	245 Roof of Battery 1A Room, El. 131'-0"	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0210 - 210 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A29	Aux. Bldg-121'-Outside of Computer Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D125	Hose Station - N1V43D125-FZ 20 Room 234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D126	Hose Station - N1V43D126-FZ 20 Room 210	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-32-2	U1-20 Detection System 1A-32-2 Room 213	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-36-1	U1-20 Detection System 1A-36-1 Room 210	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-36-2	U1-20 Detection System 1A-36-2 Room 211	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-36-3	U1-20 Detection System 1A-36-3 Room 228	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-36-4	U1-20 Detection System 1A-36-4 Room 234	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes
1A-36-5	U1-20 Detection System 1A-36-5 Room 244	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-36-6	U1-20 Detection System 1A-36-6 Room 245	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Fire Zone ID:** 0210 - 210 Corridor

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-36-1	Preaction Sprinkler System, U1-20, Aux Building Elevation 121' West Corridor, Room 210	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-36-2	Preaction Sprinkler System, U1-20, Aux Building Elevation 121' West Corridor, Room 211	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-36-3	Preaction Sprinkler System, U1-20, Aux Building Elevation 121' Bat. Service Room, Room 213	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-1A-36-4	Preaction Sprinkler System, U1-20, Aux Building Elevation 121' West Corridor, Room 228	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-36-5	Preaction Sprinkler System, U1-20, Aux Building Elevation 131' Battery Room Mezzanine, Room 244	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-36-6	Preaction Sprinkler System, U1-20, Aux Building Elevation 131' Battery Room Mezzanine, Room 245	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-36-7	Preaction Sprinkler System, U1-20, Aux Building Elevation 139' Elec Penetration Room, Room 234	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-152/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-163/213-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-164/213-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-165/211-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-166/211-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/228-6/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/234-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-210/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-212/244-16/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-214/245-17/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-225/213-20/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-228/339-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-234/345-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-244/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-245/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,1-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,2-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-212/213-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-245/209-20/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N,1-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N,2-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-210/201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Fire Zone ID:** 0210 - 210 Corridor

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-212/210-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-214/210-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-225/213-20/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-244/254-20/12-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-245/202-20/15-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/234-S01/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/234-S01/20-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-201/210-14/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-244/226-20/19-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-245/224-20/18-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-254/210-12/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-209/210-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-211/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-212/211-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-214/213-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-226/211-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-228/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-234/227-20/13-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-234/OUTSIDE-20/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-244/227-20/13-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-212/244-16/20-131: 1-121-115-40	0:00, F. of 244	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-214/245-17/20-131: 1-121-127-02	0:00, F. of 245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121: 1-121-116-06	0:00, W. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-212/213-16/20-121: 1-121-115-42	0:00, E. of 212	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-225/213-20/20-121: 1-121-115-30	0:00, N. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-225/213-20/20-121: 1-121-115-31	0:00, N. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-202/210-15/20-121: 1-121-115-15	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-16	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-38	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121: 1-121-115-39	0:00, S. of 202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-244/226-20/19-131: 1-121-115-32	0:00, N. of 226	-	Yes		Yes	-
U1-FNP-S-244/226-20/19-131: 1-121-115-33	0:00, N. of 226	-	Yes		Yes	-
U1-FNP-S-245/224-20/18-131: 1-121-115-21	0:00, S. of 245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-245/224-20/18-131: 1-121-115-22	0:00, S. of 245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-214/213-17/20-121: 1-121-115-43	0:00, W. of 214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121: 1-121-116-01	0:00, W. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121: 1-121-116-03	0:00, W. of 233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121: 1-121-116-05	0:00, W. of 233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Fire Zone ID:** 0210 - 210 Corridor

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E,1-234/235-20/23-121 223	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121 224	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-212/213-16/20-121 210	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-225/213-20/20-121 216	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-Elev 1/234-S01/20-121 Elev. No. 1 (2)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/234-S01/20-121 225	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-201/210-14/20-121 208	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-202/210-15/20-121 207	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-254/210-12/20-121 209	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-214/213-17/20-121 211	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-226/211-19/20-121 218	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121 219	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121 222	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-20-AUX BUILDING-210-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-20-AUX BUILDING-213-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-20-AUX BUILDING-228-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-20-AUX BUILDING-234-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-020 - Aux Building	Systems and Features
Fire Zone ID:	0211 - 211 Corridor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-020 - Aux Building	Systems and Features
Fire Zone ID:	0213 - 213 Battery Service Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0225 - 225 Battery Charger Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A19	Aux. Bldg-121'-Battery Charge Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-32-5	U1-20 Detection System 1A-32-5 Room 225	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-167/225-94/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-168/225-4/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-225/213-20/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-226/225-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-225/213-20/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-225/229-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-224/225-18/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-226/225-19/20-121: 1-121-115-26	0:00, W. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-226/225-19/20-121: 1-121-115-34	0:00, W. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-225/213-20/20-121: 1-121-115-30	0:00, N. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-225/213-20/20-121: 1-121-115-31	0:00, N. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-224/225-18/20-121: 1-121-115-27	0:00, E. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-224/225-18/20-121: 1-121-115-35	0:00, E. of 225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-226/225-19/20-121 217	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-225/213-20/20-121 216	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-224/225-18/20-121 215	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	1-020 - Aux Building	Systems and Features
Fire Zone ID:	0225 - 225 Battery Charger Room	

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-20-AUX BUILDING-225-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-020 - Aux Building	Systems and Features
Fire Zone ID:	0228 - 228 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0234 - 234 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D125	Hose Station - N1V43D125-FZ 20 Room 234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-233/234-21/20-121	3:00, , U1 3 hr. Rated Barrier at ele 121 between Rooms 233/234 and fire areas 21/20	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-020 - Aux Building	Systems and Features
Fire Zone ID:	0244 - 244 Roof of Battery 1B Room, El. 131'-0"	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	1-020 - Aux Building	Systems and Features
Fire Zone ID:	0245 - 245 Roof of Battery 1A Room, El. 131'-0"	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using performance based orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with performed-based approach Train A PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using performance-based approach Train A supplying Steam Generator 1B. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Performance-based approach Shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li> <li>Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-020 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-15), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between room 233 (area 1-021) and 228 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer PORVs transfer relays for PORVs, the main steam isolation valves and RWST charging pump suction valves and the main steam atmospheric relief valves and establish CST level Indication.</li> <li>• Per the FSAR, for the lack of full area automatic fire suppression coverage: <ul style="list-style-type: none"> <li>◦ A smoke detection system provides coverage for the entire fire area.</li> <li>◦ An automatic water suppression system covers the entire fire area except for one room that does not contain any safe shutdown equipment or raceways.</li> <li>◦ Raceways with Kaowool fire barriers are protected by the automatic fire suppression system.</li> <li>◦ Fire fighting equipment is available for use by the fire brigade.</li> </ul> </li> <li>• Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-1-9934, DCP 03-1-9941, and DCP 03-1-9901. However, note that APC correspondence and the NRC SER for this exemption request do not take credit for the Kaowool raceway fire barriers.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> <li>• The sprinkler system in room 234 will serve as a water curtain to prevent the passage of a fire through the non-rated steel hatches. Sprinkler systems in the hatch area above and below room 234 will prevent the spread of fire from these areas into Fire Area 1-020.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-020 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-19), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 235 (area 1-023) and 234 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-38), Unit 1 Auxiliary Building, Elevations 100, 127, 139, 155, and 175 ft. (Fire Area 1-006), lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of a rated 3 hour boundary between fire areas 1-020 and 1-006, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The sprinkler system installed in rooms 234 and 185 serves the purpose of a water curtain to prevent the spread of fire via the hatchway.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-020 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 2-27), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 233 (area 1-021) and 228 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-28), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and replace trip device in panel Q1R42B0001B, breaker LB14</p>
0210	210 Corridor	E, R, D	E, R, D, S, N	E, B	<p>Detection System, 1A-32-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-36-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-36-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-36-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-36-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-36-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-36-6:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p>



## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-152/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-163/213-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-164/213-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-165/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-165/211-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-166/211-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/228-6/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/234-6/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-210/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-212/244-16/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-214/245-17/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-225/213-20/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-228/339-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-234/345-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-244/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-245/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E,1-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E,2-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E,3-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-212/213-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-245/209-20/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N,1-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N,2-234/235-20/23-121:

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-210/201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-212/210-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-214/210-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-225/213-20/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-244/254-20/12-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-245/202-20/15-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-201/210-14/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-202/210-15/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-244/226-20/19-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-245/224-20/18-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-254/210-12/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-209/210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-211/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-212/211-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-214/213-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-226/211-19/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-228/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-229/228-21/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-233/228-21/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-234/227-20/13-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-234/OUTSIDE-20/YARD-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-020 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-W-244/227-20/13-131: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-20-AUX BUILDING-210-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-20-AUX BUILDING-213-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-20-AUX BUILDING-228-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-20-AUX BUILDING-234-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-36-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-36-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-36-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-36-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-36-5: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-36-6: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-36-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.
0211	211 Corridor	—	—	—	—
0213	213 Battery Service Room	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-020 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0225	225 Battery Charger Room	—	E, R, D, S, N	E, B	Detection System, 1A-32-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-167/225-94/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-168/225-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-225/213-20/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-226/225-19/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-225/213-20/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-225/229-20/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-224/225-18/20-121: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-20-AUX BUILDING-225-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0228	228 Corridor	—	—	—	—
0234	234 Hallway	—	—	—	FireBarrier, U1-FNP-S-233/234-21/20-121: -- Barrier: Required to support a fire area boundary evaluation.
0244	244 Roof of Battery 1B Room, El. 131'-0"	—	—	—	—
0245	245 Roof of Battery 1A Room, El. 131'-0"	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-021-U1 - Aux Building Switchgear Rooms

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0229-U1	229 Switchgear Room	
0233-U1	233 Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0229-U1 - 229 Switchgear Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-7	U1-21 Detection System 1A-104-7 Room 229	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-104-8	U1-21 Detection System 1A-104-8 Room 233	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-28-1	Local CO2 system in Fire Area 21 , room number 229, 4160V Swgr Bus 1G	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1A-28-2	Local CO2 system in Fire Area 21 , room number 233, Station Service Trans. 1F 4KV Disc. SW 1B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-29-1	Local CO2 system in Fire Area 21 , room number 229, 600V Load Center 1C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1A-29-2	Local CO2 system in Fire Area 21 , room number 229, 600V Load Center 1E	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1A-30-1	Local CO2 Suppression system in Fire Area 21 , room number 233, 600V Load Center 1F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-30-2	Local CO2 Suppression system in Fire Area 21 , room number 233, 600V Swgr Bus 1B	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/229-6/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/233-6/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-229/335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-233/343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-233/223-21/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-021-U1 - Aux Building Switchgear Rooms  
**Fire Zone ID:** 0229-U1 - 229 Switchgear Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-225/229-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-226/229-19/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-224/229-18/21-121: 1-121-115-24	0:00, N. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121: 1-121-115-25	0:00, N. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-13	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-14	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-15	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-16	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121: 1-121-116-01	0:00, W. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121: 1-121-116-03	0:00, W. of 233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121: 1-121-116-05	0:00, W. of 233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-233/235-21/23-121 227	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121 219	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121 222	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VBHJZ03	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ06	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ09	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-
1VBHJZ12	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VYDG15J	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-21-AUX BUILDING-229-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-21-AUX BUILDING-233-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-21-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0233-U1 - 233 Switchgear Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-233/234-21/20-121	3:00, , U1 3 hr. Rated Barrier at ele 121 between Rooms 233/234 and fire areas 21/20	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VBHJZ03	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ06	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ09	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-
1VBHJZ12	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VYDG15J	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-021-U1 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV or aux spray for pressure reduction and performance-based approach Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A/1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored,	

## Fire Safety Analysis

**Fire Area ID:** 1-021-U1 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by performance-based approach Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-021-U1 - Aux Building Switchgear Rooms NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-15), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer power operated relief valves (PORVs).</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-15), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between room 233 (area 1-021) and 228 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-27), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-27), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 233 (area 1-021) and 228 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 1-021-U1 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to install tray covers onto 1VBHJZ09, circuit mod. to install a fuse for cable 1VBJ5012F in pnl Q1H25L021-B, replace trip device in pnl Q1R42B0001A, bkr LA13; Q1R42B0001B, bkr LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0229-U1	229 Switchgear Room	E, R, D	E, R, D, S, N	E, R, B	<p>Detection System, 1A-104-7:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-104-8:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 1VBHJZ03:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VBHJZ06:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VBHJZ09:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VBHJZ12:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VBHJZ15:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VYDG15J:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-185/229-6/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-185/233-6/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-229/335-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-233/343-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-233/223-21/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-224/229-18/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-225/229-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-226/229-19/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-233/235-21/23-121:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/229-8/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-117/229-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-229/228-21/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-233/228-21/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/229-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-28-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-28-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-29-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-29-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-30-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U1-21-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-21-AUX BUILDING-229-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-21-AUX BUILDING-233-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U1 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0233-U1	233 Switchgear Room	—	—	R, B	ERFBS, 1VBHJZ03: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ06: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ09: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ12: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ15: -- Risk: Required to meet Risk criteria. ERFBS, 2VYDG15J: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-S-233/234-21/20-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
0229-U2	229 Switchgear Room	
0233-U2	233 Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0229-U2 - 229 Switchgear Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-104-7	U1-21 Detection System 1A-104-7 Room 229	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
1A-104-8	U1-21 Detection System 1A-104-8 Room 233	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-28-1	Local CO2 system in Fire Area 21 , room number 229, 4160V Swgr Bus 1G	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1A-28-2	Local CO2 system in Fire Area 21 , room number 233, Station Service Trans. 1F 4KV Disc. SW 1B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-29-1	Local CO2 system in Fire Area 21 , room number 229, 600V Load Center 1C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1A-29-2	Local CO2 system in Fire Area 21 , room number 229, 600V Load Center 1E	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
GS-1A-30-1	Local CO2 Suppression system in Fire Area 21 , room number 233, 600V Load Center 1F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-30-2	Local CO2 Suppression system in Fire Area 21 , room number 233, 600V Swgr Bus 1B	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/229-6/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-185/233-6/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-229/335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-233/343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-233/223-21/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-021-U2 - Aux Building Switchgear Rooms  
**Fire Zone ID:** 0229-U2 - 229 Switchgear Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-225/229-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-226/229-19/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-224/229-18/21-121: 1-121-115-24	0:00, N. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-224/229-18/21-121: 1-121-115-25	0:00, N. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-13	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-14	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-15	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-16	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121: 1-121-116-01	0:00, W. of 229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121: 1-121-116-03	0:00, W. of 233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121: 1-121-116-05	0:00, W. of 233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-233/235-21/23-121 227	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-229/228-21/20-121 219	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-233/228-21/20-121 222	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VBHJZ03	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ06	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ09	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-
1VBHJZ12	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VYDG15J	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-21-AUX BUILDING-229-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-21-AUX BUILDING-233-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-21-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0233-U2 - 233 Switchgear Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-233/234-21/20-121	3:00, , U1 3 hr. Rated Barrier at ele 121 between Rooms 233/234 and fire areas 21/20	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VBHJZ03	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ06	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ09	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-
1VBHJZ12	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VBHJZ15	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VYDG15J	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-021-U2 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-021-U2 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-021-U2 - Aux Building Switchgear Rooms NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-15), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer power operated relief valves (PORVs).</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-15), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between room 233 (area 1-021) and 228 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-27), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-27), Unit 1 Auxiliary Building Switchgear Room Train B (Fire Area 1-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 233 (area 1-021) and 228 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
0229-U2	229 Switchgear Room	E, R, D	E, R, D, S, N	E, R, B	Detection System, 1A-104-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-104-8: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 1VBHJZ03: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ06: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ09: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ12: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ15: -- Risk: Required to meet Risk criteria. ERFBS, 2VYDG15J: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-185/229-6/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-185/233-6/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-229/335-21/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-233/343-21/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-233/223-21/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-224/229-18/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-225/229-20/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-226/229-19/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-233/235-21/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/229-8/21-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-117/229-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-229/228-21/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-233/228-21/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/229-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-28-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-28-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-29-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-29-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-30-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U1-21-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-21-AUX BUILDING-229-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-21-AUX BUILDING-233-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-021-U2 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0233-U2	233 Switchgear Room	—	—	R, B	ERFBS, 1VBHJZ03: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ06: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ09: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ12: -- Risk: Required to meet Risk criteria. ERFBS, 1VBHJZ15: -- Risk: Required to meet Risk criteria. ERFBS, 2VYDG15J: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-S-233/234-21/20-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U1 - Aux Building Switchgear Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
0235-U1	235 Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U1 - Aux Building Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0235-U1 - 235 Switchgear Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D125	Hose Station - N1V43D125-FZ 20 Room 234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-31-1	U1-23 Detection System 1A-31-1 Room 235	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-31-1	Halon Flooding Suppression system in Fire Area 23 , room number 235, CRDM Control System Cabinets Room	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-235/346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,1-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,2-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-235/223-23/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N,1-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N,2-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/235-30/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-250/235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-023-U1 - Aux Building Switchgear Room  
**Fire Zone ID:** 0235-U1 - 235 Switchgear Room

### Systems and Features

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E,3-234/235-20/23-121: 1-121-116-06	0:00, W. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-13	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-14	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-15	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-16	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-07	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-08	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-18	0:00, S. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-19	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E,1-234/235-20/23-121 223	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121 224	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/235-30/23-121 241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-250/235-31/23-121 240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121 227	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-23-AUX BUILDING-235-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-023-U1 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by {PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-023-U1 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U1 - Aux Building Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li><li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U1 - Aux Building Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-023-U1 - Aux Building Switchgear Room NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> <li>• The sprinkler system in room 234 will serve as a water curtain to prevent the passage of a fire through the non-rated steel hatches. Sprinkler systems in the hatch area above and below room 234 will prevent the spread of fire from these areas into Fire Area 1-020.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-19), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer power operated relief valves (PORVs).</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-19), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 235 (area 1-023) and 234 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U1 - Aux Building Switchgear Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-28), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-28), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U1 - Aux Building Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA13; Q1R42B0001B, breaker LB07.
0235-U1	235 Switchgear Room	E, R, D	E, R, D, S, N	E, B	Detection System, 1A-31-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-185/235-6/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-235/346-23/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E,1-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E,2-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E,3-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-235/223-23/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/235-S01/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N,1-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N,2-234/235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/235-4/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-249/235-30/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-250/235-31/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/235-S01/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-233/235-21/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/235-4/23-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-31-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-23-AUX BUILDING-235-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 1-023-U2 - Aux Building Switchgear Room

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0235-U2	235 Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U2 - Aux Building Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0235-U2 - 235 Switchgear Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D125	Hose Station - N1V43D125-FZ 20 Room 234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-31-1	U1-23 Detection System 1A-31-1 Room 235	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-31-1	Halon Flooding Suppression system in Fire Area 23 , room number 235, CRDM Control System Cabinets Room	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-235/346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,1-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,2-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-235/223-23/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N,1-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N,2-234/235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/235-30/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-250/235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-023-U2 - Aux Building Switchgear Room  
**Fire Zone ID:** 0235-U2 - 235 Switchgear Room

### Systems and Features

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E,3-234/235-20/23-121: 1-121-116-06	0:00, W. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-13	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-14	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-15	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121: 1-121-116-16	0:00, N. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-07	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-08	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-18	0:00, S. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/235-4/23-121: 1-121-116-19	0:00, E. of 235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E,1-234/235-20/23-121 223	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E,3-234/235-20/23-121 224	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/235-30/23-121 241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-250/235-31/23-121 240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-233/235-21/23-121 227	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-23-AUX BUILDING-235-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-023-U2 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-023-U2 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U2 - Aux Building Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li><li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U2 - Aux Building Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-023-U2 - Aux Building Switchgear Room NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> <li>• The sprinkler system in room 234 will serve as a water curtain to prevent the passage of a fire through the non-rated steel hatches. Sprinkler systems in the hatch area above and below room 234 will prevent the spread of fire from these areas into Fire Area 1-020.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-19), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer power operated relief valves (PORVs).</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-19), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 235 (area 1-023) and 234 (area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> </ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-023-U2 - Aux Building Switchgear Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-28), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-28), Unit 1 Auxiliary Building CRDM Switchgear Room Train B (Fire Area 1-023), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 1-023-U2 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0235-U2	235 Switchgear Room	E, R	E, R, D, S, N	E, B	<p>Detection System, 1A-31-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-185/235-6/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-235/346-23/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E,1-234/235-20/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E,2-234/235-20/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E,3-234/235-20/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E,3-234/235-20/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-235/223-23/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-STAIR 1/235-S01/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N,1-234/235-20/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N,2-234/235-20/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-236/235-4/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-249/235-30/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-250/235-31/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-STAIR 1/235-S01/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-233/235-21/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-236/235-4/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1A-31-1:  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-23-AUX BUILDING-235-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0249-U1	249 Cable Chase	
0252-U1	252 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0249-U1 - 249 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-61-1	U1-30 Detection System 1A-61-1 Room 249	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-61-1	Preaction Sprinkler System, U1-30, Cable Chase to Diesel, Room 249	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/249-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-249/461-30/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-189/249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-190/249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-241/249-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/235-30/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-249/241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-249/241-30/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-249/STAIR 1-30/S01-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-249/Stair 1-30/S01-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-249/235-30/23-121 241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	Systems and Features
Fire Zone ID:	0249-U1 - 249 Cable Chase	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-30-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0252-U1 - 252 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-61-2	U1-30 Detection System 1A-61-2 Room 252	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-61-2	Preaction Sprinkler System, U1-30, Cable Chase to Diesel, Room 252	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-252/251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-252/241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-30-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves, the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performed-based-approach Train A PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A/1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by {PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	

## Fire Safety Analysis

**Fire Area ID:** 1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-29), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer PORVs and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-29), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-29), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train B (Fire Area 1-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-30), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030 Unit 2 Cabling), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> <li>• A long term manual action (&gt; 24 hours) can be performed to shift the service water discharge from the circulating water canal to recirculate to the service water pond by manually repositioning the subject valves [QSP16V506-B and QSP16V508-B] as required.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0249-U1	249 Cable Chase	D	E, R, S, N	R, B	<p>Detection System, 1A-61-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-185/249-6/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-249/461-30/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-189/249-6/30-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-190/249-6/30-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-241/249-6/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-249/235-30/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-249/346-30/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-249/241-30/6-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-249/241-30/6-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-249/STAIR 1-30/S01-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-249/Stair 1-30/S01-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-250/249-31/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-250/249-31/30-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-30-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Water Suppression, WS-1A-61-1:</p> <p>-- DID: Required to meet DID criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U1 - Aux Building Cable Chase, Rooms 249 & 252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0252-U1	252 Cable Chase	E, D	E, R, D, S, N	R, B	Detection System, 1A-61-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-252/251-30/31-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-252/241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-30-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-61-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0249-U2	249 Cable Chase	
0252-U2	252 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0249-U2 - 249 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-61-1	U1-30 Detection System 1A-61-1 Room 249	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/249-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-249/461-30/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-189/249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-190/249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-241/249-6/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/235-30/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-249/241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-249/241-30/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-249/STAIR 1-30/S01-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-249/Stair 1-30/S01-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-249/235-30/23-121 241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	Systems and Features
Fire Zone ID:	0249-U2 - 249 Cable Chase	

Electrical Raceway Fire Barrier Systems

Other Passive Features



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0252-U2 - 252 Cable Chase	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-61-2	U1-30 Detection System 1A-61-2 Room 252	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-61-2	Preaction Sprinkler System, U1-30, Cable Chase to Diesel, Room 252	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-252/251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-252/241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Licensing Action** Appendix R Exemption (No. 1-29), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

**Licensing Basis** Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:

- Fire resistant coating on a door has been placed in a surveillance program.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

**Licensing Action** Appendix R Exemption (No. 2-29), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train B (Fire Area 1-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

**Licensing Basis** Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Fire resistant coating on a door has been placed in a surveillance program.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

**Licensing Action** Appendix R Exemption (No. 2-30), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030 Unit 2 Cabling), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

**Licensing Basis** Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.
- A long term manual action (> 24 hours) can be performed to shift the service water discharge from the circulating water canal to recirculate to the service water pond by manually repositioning the subject valves [QSP16V506-B and QSP16V508-B] as required.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0249-U2	249 Cable Chase	—	E, R, S, N	—	Detection System, 1A-61-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-185/249-6/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-249/461-30/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-189/249-6/30-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-190/249-6/30-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-241/249-6/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-249/235-30/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-249/346-30/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-249/241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-249/241-30/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-249/STAIR 1-30/S01-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-249/Stair 1-30/S01-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-250/249-31/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-250/249-31/30-139: -- Barrier: Required to support a fire area boundary evaluation.
0252-U2	252 Cable Chase	E	E, R, D, S, N	—	Detection System, 1A-61-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-252/251-30/31-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-252/241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-252/OUTSIDE-30/YARD-127:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-030-U2 - Aux Building Cable Chase, Rooms 249 & 252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-61-2: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0250-U1	250 Cable Chase	
0251-U1	251 Cable Chase	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0250-U1 - 250 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-60-1	U1-31 Detection System 1A-60-1 Room 250	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-60-1	Preaction Sprinkler System, U1-31, Cable Chase to Diesel, Room 250	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/250-6/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-250/461-31/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-250/236-31/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-250/235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-250/189-31/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-250/241-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-250/235-31/23-121 240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	Systems and Features
Fire Zone ID:	0250-U1 - 250 Cable Chase	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-31-AUX BUILDING-250-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-31-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0251-U1 - 251 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-60-2	U1-31 Detection System 1A-60-2 Room 251	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-60-2	Preaction Sprinkler System, U1-31, Cable Chase to Diesel, Room 251	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-251/195-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-252/251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-251/241-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-251/OUTSIDE-31/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-31-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1A or 1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach Shutdown margin. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 1A/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-18), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 1-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-33), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, and lack of 3 hour fire rated barrier separating redundant trains, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change to be installed as a result of Regulatory Guide (RG) 1.97 will provide a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-33), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> </ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-22), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.
- A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0250-U1	250 Cable Chase	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 1A-60-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-185/250-6/31-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-250/461-31/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-250/236-31/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-250/235-31/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-250/189-31/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-250/241-31/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-250/249-31/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-250/249-31/30-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-31-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-31-AUX BUILDING-250-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-60-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>
0251-U1	251 Cable Chase	E, D	E, R, D, S, N	R, B	<p>Detection System, 1A-60-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-251/195-31/6-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-252/251-30/31-127:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U1 - Aux Building Cable Chase, Rooms 250 & 251	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-251/241-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-251/OUTSIDE-31/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-31-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-60-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0250-U2	250 Cable Chase	
0251-U2	251 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0250-U2 - 250 Cable Chase	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-60-1	U1-31 Detection System 1A-60-1 Room 250	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-60-1	Praection Sprinkler System, U1-31, Cable Chase to Diesel, Room 250	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-185/250-6/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-250/461-31/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-250/236-31/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-250/235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-250/189-31/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-250/241-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-250/249-31/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-250/235-31/23-121 240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251	Systems and Features
Fire Zone ID:	0250-U2 - 250 Cable Chase	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-31-AUX BUILDING-250-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-31-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0251-U2 - 251 Cable Chase	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-60-2	U1-31 Detection System 1A-60-2 Room 251	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-60-2	Preaction Sprinkler System, U1-31, Cable Chase to Diesel, Room 251	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-251/195-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-252/251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-251/241-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-251/OUTSIDE-31/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-31-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored	



## Fire Safety Analysis

**Fire Area ID:** 1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G	Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-18), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 1-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Fire resistant coating on a door has been placed in a surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-33), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, and lack of 3 hour fire rated barrier separating redundant trains, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change to be installed as a result of Regulatory Guide (RG) 1.97 will provide a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-33), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Fire resistant coating on a door has been placed in a surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-22), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.
- A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
0250-U2	250 Cable Chase	E	E, R, D, S, N	E, R, B	Detection System, 1A-60-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-185/250-6/31-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-250/461-31/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-250/236-31/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-250/235-31/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-250/189-31/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-250/241-31/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-250/249-31/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-250/249-31/30-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-31-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-31-AUX BUILDING-250-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-60-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
0251-U2	251 Cable Chase	E	E, R, D, S, N	R, B	Detection System, 1A-60-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-251/195-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-252/251-30/31-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-251/241-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-251/OUTSIDE-31/YARD-127:

## Fire Safety Analysis

**Fire Area ID:** 1-031-U2 - Aux Building Cable Chase, Rooms 250 & 251

**Required Systems and Features**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-31-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-1A-60-2: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0317	317 Penetration Room Filtration System Equipment Room	
0334	334 Electrical Penetration Room, Train B	



## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Fire Zone ID:** 0317 - 317 Penetration Room Filtration System Equipment Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-48-3	U1-34 Detection System 1A-48-3 Room 317	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2317/317-U2-34/U1-34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-203/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-204/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-209/317-34/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-CEILING-317/402-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-317/403-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-317/410A-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-CEILING-317/410B-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-501/317-51/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-215/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-322/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-316/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-317/318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-CHASE1/317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-215/317-4/34-139: 1-139-118-08	0:00, S. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-N-322/317-4/34-139: 1-139-118-17	0:00, N. of 322	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-01	0:00, N. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-02	0:00, N. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-03	0:00, E. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-CHASE1/317-4/34-139: 1-139-134-04	0:00, E. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-316/317-4/34-139: 1-139-118-12	0:00, E. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-317/318-34/40-139: 1-139-118-07	0:00, W. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0317 - 317 Penetration Room Filtration System Equipment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-317/318-34/40-139: 1-139-118-15	0:00, W. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-322/317-4/34-139 311	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAFU-R4D	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAFU-R4E	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-34-AUX BUILDING-317-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0334 - 334 Electrical Penetration Room, Train B	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D117	Hose Station - N1V43D117-FZ 34 Room 334	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-45-2	U1-34 Detection System 1A-45-2 Room 334	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	Yes
1A-46-1	U1-34 Detection System 1A-46-1 Room 334	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-223/334-1/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/429-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/478-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-116/334-8/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-117/334-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-236/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-246/334-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-334/333-34/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-343/334-34/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-346/334-34/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-322/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-323/334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-334/CTMT-34/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/334-S02/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/334-S02/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-334/318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0334 - 334 Electrical Penetration Room, Train B	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-223/334-1/34-139: 1-139-119-18	0:00, F. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-223/334-1/34-139: 1-139-119-19	0:00, F. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-223/334-1/34-139: 1-139-120-08	0:00, F. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-334/429-34/4-155: 1-139-119-20	0:00, F. of 429	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-334/333-34/35-139: 1-139-120-07	0:00, E. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-334/333-34/35-139 318	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/334-S02/34-139 317	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/334-S02/34-139 317A	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VAFU-R4D	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAFU-R4E	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-34-AUX BUILDING-334-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using performed-based approach with one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using performed-based approach Train A PORV or block valve and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring the Loop 1 and Loop 2 RCPs are shut off. Performance-based approach for spurious auxiliary spray. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A/1B. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"><li>• Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li><li>• Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li></ul>	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-35), Unit 1 Aux. Building, Electrical Pen. Rm Train B and Pen. Room Filtration System Equip. Rm (Fire Area 1-034), Enclosure of one train with a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to restore the control of the PORVs and reactor head vent valves, isolation RCS and pressurizer sample line valves, pre-fire alignment of CCW heat exchanger valves and the reestablishment of charging pump miniflow.</li> <li>• Instrumentation cable for pressurizer pressure transmitter Q1B31PT0455-P1 has been rerouted out of Fire Area 1-034 so that pressurizer pressure signal from at least one pressure transmitter, Q1B31PT0455-P1, is available.</li> <li>• Isolation valve Q1P16MOV130B-B will be maintained in the open position by racking out the power at the MCC breaker whenever CCW pump 1C and CCW heat exchanger 1C are out of service.</li> <li>• A design modification installed disconnect breakers in the power supply circuits of charging pump isolation valves outside the electrical penetration room.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to seal MCC 1V (Q1R17B0009) and panel Hydrogen Analysis Cabinet (Q1E23A1T2703B) and replace trip device in panel Q1R42B0001A, breakers LA08, LA13; Q1R42B0001B, breaker LB14.
0317	317 Penetration Room Filtration System Equipment Room	—	E, R, D, S	E, R, B	Detection System, 1A-48-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. ERFBS, 1VAFU-R4D: -- Risk: Required to meet Risk criteria. ERFBS, 1VAFU-R4E: -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2317/317-U2-34/U1-34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-203/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-204/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-209/317-34/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-317/402-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-317/403-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-317/410A-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-317/410B-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-501/317-51/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-215/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-322/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CHASE1/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-316/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-317/318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-CHASE1/317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-34-AUX BUILDING-317-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-034 - Train B Electrical Pen Room & Filtration System	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0334	334 Electrical Penetration Room, Train B	—	E, R, D, S, N	E, R, B	<p>Detection System, 1A-45-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-46-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 1VAFU-R4D:  -- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 1VAFU-R4E:  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-CEILING-223/334-1/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-334/429-34/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-334/478-34/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-116/334-8/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-117/334-9/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-236/334-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-246/334-9/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-334/333-34/35-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-343/334-34/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-346/334-34/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/334-9/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-322/334-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-323/334-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-334/CTMT-34/55-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-Elev 2/334-S02/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-STAIR 2/334-S02/34-139:</p>

## Fire Safety Analysis

**Fire Area ID:** 1-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-334/318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-34-AUX BUILDING-334-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0333	333 Electrical Penetration Room, Train A	
0347	347 Electrical Penetration Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-035 - Train A Electrical Pen Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0333 - 333 Electrical Penetration Room, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-47-1	U1-35 Detection System 1A-47-1 Room 333	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-223/333-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/409-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/418-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-333/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-333/347-35/35-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-334/333-34/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-333/324-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-333/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-223/333-1/35-139: 1-139-120-09	0:00, F. of 333	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-334/333-34/35-139: 1-139-120-07	0:00, E. of 334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-334/333-34/35-139 318	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	1-035 - Train A Electrical Pen Rooms	Systems and Features
Fire Zone ID:	0333 - 333 Electrical Penetration Room, Train A	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-35-AUX BUILDING-333-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-035 - Train A Electrical Pen Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0347 - 347 Electrical Penetration Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-47-2	U1-35 Detection System 1A-47-2 Room 347	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-223/347-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-35/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-333/347-35/35-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-347/332-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-325/347-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-326/347-4/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-347/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-223/347-1/35-139: 1-139-120-11	0:00, F. of 347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-223/347-1/35-139: 1-139-120-14	0:00, F. of 347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-347/418-35/4-155: 1-139-120-15	0:00, F. of 418	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	1-035 - Train A Electrical Pen Rooms	Systems and Features
Fire Zone ID:	0347 - 347 Electrical Penetration Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-35-AUX BUILDING-347-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Performance-based approach normal letdown is isolated using orifice isolation valves, letdown isolation valve, or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using performance-based approach Train A PORV or block valve and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by performance based source range detector Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li> <li>Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated</li> </ul>	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-035 - Train A Electrical Pen Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-035 - Train A Electrical Pen Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-035 - Train A Electrical Pen Rooms Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-37), Unit 1 Auxiliary Building, Electrical Penetrations Room Train A (Fire Area 1-035), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain the control of the pressurizer power operated relief valves and the reestablishment of charging pump miniflow.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> <li>• A design modification to install disconnect breakers in the power supply circuits of charging pump isolation valves outside the electrical penetration room has been completed..</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-035 - Train A Electrical Pen Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0333	333 Electrical Penetration Room, Train A	—	E, R, D, S, N	E, D, B	Detection System, 1A-47-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-223/333-1/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/409-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/418-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-333/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-333/347-35/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-334/333-34/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-333/324-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-333/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-35-AUX BUILDING-333-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
0347	347 Electrical Penetration Room	—	E, R, S, N	D, B	Detection System, 1A-47-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-223/347-1/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-347/418-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-347/418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-333/347-35/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-347/332-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-325/347-4/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-326/347-4/35-139:

Fire Safety Analysis

Fire Area ID:	1-035 - Train A Electrical Pen Rooms	Required Systems and Features
Compliance Basis:	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-347/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-35-AUX BUILDING-347-Restricted transient controls: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-039 - Fuel Storage & Storage Rack Pits  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
0349	349 Pits for New Fuel Storage Racks	
0350	350 Pits for New Fuel Storage Racks	
0459	459 New Fuel Storage Room	

## Fire Safety Analysis

Fire Area ID: 1-039 - Fuel Storage & Storage Rack Pits  
Fire Zone ID: 0349 - 349 Pits for New Fuel Storage Racks

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-349/459-39/39-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-349/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-349/348-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-039 - Fuel Storage & Storage Rack Pits  
**Fire Zone ID:** 0350 - 350 Pits for New Fuel Storage Racks

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-350/459-39/39-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-039 - Fuel Storage & Storage Rack Pits	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0459 - 459 New Fuel Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-12	U1-39 Detection System 1A-107-12 Room 459	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-349/459-39/39-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-350/459-39/39-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-446/459-4/39-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-240/459-4/39-155: 1-155-106-01	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-02	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-03	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/459-4/39-155: 1-155-106-04	0:00, W. of 459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-446/459-4/39-155 432	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	1-039 - Fuel Storage & Storage Rack Pits	Systems and Features
Fire Zone ID:	0459 - 459 New Fuel Storage Room	

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-039 - Fuel Storage & Storage Rack Pits  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A or Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A / Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump (s) or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-039 - Fuel Storage & Storage Rack Pits	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-039 - Fuel Storage & Storage Rack Pits	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-039 - Fuel Storage & Storage Rack Pits	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-039 - Fuel Storage & Storage Rack Pits	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0349	349 Pits for New Fuel Storage Racks	—	—	—	FireBarrier, U1-FNP-Ceiling-349/459-39/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-239/349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-349/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-349/348-4/39-139: -- Barrier: Required to support a fire area boundary evaluation.
0350	350 Pits for New Fuel Storage Racks	—	—	—	FireBarrier, U1-FNP-Ceiling-350/459-39/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.
0459	459 New Fuel Storage Room	—	E, R, D	—	Detection System, 1A-107-12: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-349/459-39/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-350/459-39/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-446/459-4/39-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
0318-U1	318 Cable Spreading Room	

## Fire Safety Analysis

**Fire Area ID:** 1-040-U1 - Cable Spreading Room  
**Fire Zone ID:** 0318-U1 - 318 Cable Spreading Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-43-1	U1-40 Detection System 1A-43-1 Room 318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes
N1C31NFAMS2627-1	U1-40 Incipient Detection System N1C31NFAMS2627, Room 318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
N1H25L040-1	U1-40 Incipient Detection System N1H25L040, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1D21L0001	U1-40 Incipient Detection System Q1D21L0001, Room 0318	-	Yes	-- R: Required to meet Risk Criteria.	Yes	Yes
Q1H25L0036A-1	U1-40 Incipient Detection System Q1H25L0036A, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L0037A-1	U1-40 Incipient Detection System Q1H25L0037A, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L0038B-1	U1-40 Incipient Detection System Q1H25L0038B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L0039B-1	U1-40 Incipient Detection System Q1H25L0039B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L006A-1	U1-40 Incipient Detection System Q1H25L006A, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H25L027-B-1	U1-40 Incipient Detection System Q1H25L027-B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H25L029-B-1	U1-40 Incipient Detection System Q1H25L029-B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-040-U1 - Cable Spreading Room  
**Fire Zone ID:** 0318-U1 - 318 Cable Spreading Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-43-1	Preaction Sprinkler System, U1-40, Aux Building Elevation 139' Cable Spreading Room, Room 318	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE2/318-U2-12/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-201/318-14/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-202/318-15/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-210/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-224/318-18/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-226/318-19/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-244/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-245/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-254/318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-318/401-40/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-318/417-40/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-319/318-42/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-335/318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-317/318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-318/319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-334/318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/318-S02/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/0318-12/40-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/40	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139: 1-139-118-03	0:00, S. of 2318	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-317/318-34/40-139: 1-139-118-07	0:00, W. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-317/318-34/40-139: 1-139-118-15	0:00, W. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-318/319-40/42-139: 1-139-118-05	0:00, E. of 319	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-318/319-40/42-139 312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139 315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-040-U1 - Cable Spreading Room	Systems and Features
Fire Zone ID:	0318-U1 - 318 Cable Spreading Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-40-AUX BUILDING-318-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-040-U1 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs. CCW to RCP thermal barriers are isolated using the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring the Loop 1 and Loop 2 RCPs are shut off.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A.	
6 Process Monitoring	Essential processes are monitored by dedicated instruments at the hot shutdown panel.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

## Fire Safety Analysis

**Fire Area ID:** 1-040-U1 - Cable Spreading Room

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of the manual carbon dioxide suppression system will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Penetration Seals #24-100-32; 09-139-9; and 02-139-29	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of this evaluation is to document the acceptability of FNP Unit 1 Penetration Seals #24-100-32, 09-139-9, and 02-139-29 as 3-hour rated fire barriers.</p> <p>Bases for Acceptability:</p> <p>The evaluation demonstrates that the penetrations have been evaluated as acceptable 3-hour rated penetrations based on the features of construction as compared to test results furnished by various recognized industry tests.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"><li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li><li>• Refinement of field judgments through review of design drawing/documentation; or</li><li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the two code editions
- The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

6-1 of the report

- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

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<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	Yes
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<b>Summary</b>	Purpose:
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This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,

## Fire Safety Analysis

**Fire Area ID:**

1-040-U1 - Cable Spreading Room

**Compliance Basis:**

NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 1-040-U1 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and to plumb air from emergency air compressor header to AFW flow control valve.</p> <p>-- Risk: Modification to install incipient detection, provide fuse or other elec. iso. device at the DC shunt conn. pt., replace trip device in pnl Q1R42B0001A, bkrs LA08 and LA013; pnl Q1R42B0001B, bkr LB02.</p> <p>Procedures/Recovery Actions:</p> <p>-- DID: Improvements to procedures necessary to incorporate recovery actions required to meet DID criteria.</p>
0318-U1	318 Cable Spreading Room	E, R, D	E, R, D, S, N	E, D, B	<p>Detection System, 1A-43-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, N1C31NFAMS2627-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N1H25L040-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1D21L0001:</p> <p>-- Risk: Required to meet Risk Criteria.</p> <p>Detection System, Q1H25L0036A-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H25L0037A-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H25L0038B-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H25L0039B-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H25L006A-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q1H25L027-B-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L029-B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2318/318-U2-40/U1-40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-CHASE2/318-U2-12/U1-40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-201/318-14/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-202/318-15/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-210/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-224/318-18/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-226/318-19/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-244/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-245/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-254/318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-318/401-40/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-318/417-40/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-319/318-42/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/318-8/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-335/318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-501/318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-215/318-4/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-317/318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-318/319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-334/318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-501/318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/318-S02/40-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U1 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2254/0318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-40-AUX BUILDING-318-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-43-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
0318-U2	318 Cable Spreading Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0318-U2 - 318 Cable Spreading Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-43-1	U1-40 Detection System 1A-43-1 Room 318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes
N1C31NFAMS2627-1	U1-40 Incipient Detection System N1C31NFAMS2627, Room 318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
N1H25L040-1	U1-40 Incipient Detection System N1H25L040, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1D21L0001	U1-40 Incipient Detection System Q1D21L0001, Room 0318	-	Yes	-- R: Required to meet Risk Criteria.	Yes	Yes
Q1H25L0036A-1	U1-40 Incipient Detection System Q1H25L0036A, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L0037A-1	U1-40 Incipient Detection System Q1H25L0037A, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L0038B-1	U1-40 Incipient Detection System Q1H25L0038B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L0039B-1	U1-40 Incipient Detection System Q1H25L0039B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q1H25L006A-1	U1-40 Incipient Detection System Q1H25L006A, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H25L027-B-1	U1-40 Incipient Detection System Q1H25L027-B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q1H25L029-B-1	U1-40 Incipient Detection System Q1H25L029-B, Room 0318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-040-U2 - Cable Spreading Room  
**Fire Zone ID:** 0318-U2 - 318 Cable Spreading Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-43-1	Preaction Sprinkler System, U1-40, Aux Building Elevation 139' Cable Spreading Room, Room 318	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-CHASE2/318-U2-12/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-201/318-14/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-202/318-15/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-210/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-224/318-18/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-226/318-19/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-244/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-245/318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-254/318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-318/401-40/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-318/417-40/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-319/318-42/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-116/318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-335/318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-215/318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-317/318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-318/319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-334/318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-501/318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/318-S02/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/0318-12/40-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/40	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139: 1-139-118-03	0:00, S. of 2318	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-317/318-34/40-139: 1-139-118-07	0:00, W. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-317/318-34/40-139: 1-139-118-15	0:00, W. of 317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-318/319-40/42-139: 1-139-118-05	0:00, E. of 319	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-318/319-40/42-139 312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139 315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-040-U2 - Cable Spreading Room	Systems and Features
Fire Zone ID:	0318-U2 - 318 Cable Spreading Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-40-AUX BUILDING-318-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-040-U2 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A or Train B MDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-040-U2 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Performance-based approach electrical power is supplied by off-site power via SUT 2A/SUT 2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of the manual carbon dioxide suppression system will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, Acceptability Determination of Penetration Seals #24-100-32; 09-139-9; and 02-139-29	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of this evaluation is to document the acceptability of FNP Unit 1 Penetration Seals #24-100-32, 09-139-9, and 02-139-29 as 3-hour rated fire barriers.</p> <p>Bases for Acceptability:</p> <p>The evaluation demonstrates that the penetrations have been evaluated as acceptable 3-hour rated penetrations based on the features of construction as compared to test results furnished by various recognized industry tests.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	<p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

6-1 of the report

- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

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<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	Yes
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<b>Summary</b>	Purpose:
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This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,

## Fire Safety Analysis

**Fire Area ID:**

1-040-U2 - Cable Spreading Room

**Compliance Basis:**

NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
0318-U2	318 Cable Spreading Room	E, R, D	E, R, D, S, N	E, D, B	Detection System, 1A-43-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, N1C31NFAMS2627-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N1H25L040-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1D21L0001: -- Risk: Required to meet Risk Criteria. Detection System, Q1H25L0036A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L0037A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L0038B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L0039B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L006A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L027-B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q1H25L029-B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2318/318-U2-40/U1-40-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-CHASE2/318-U2-12/U1-40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-201/318-14/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-202/318-15/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-210/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-224/318-18/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-226/318-19/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-244/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-245/318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-254/318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-318/401-40/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-318/417-40/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-319/318-42/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-116/318-8/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-335/318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-501/318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-215/318-4/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-317/318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-318/319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-334/318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-501/318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/318-S02/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2254/0318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-40-AUX BUILDING-318-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-040-U2 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Water Suppression, WS-1A-43-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0335-U1	335 Load Center Room, Train A	
0343-U1	343 Load Center Room, Train A	
0346-U1	346 Switchgear and M-G Set Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0335-U1 - 335 Load Center Room, Train A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-37-1	U1-41 Detection System 1A-37-1 Room 346	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-38-1	U1-41 Detection System 1A-38-1 Room 346	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-39-1	U1-41 Detection System 1A-39-1 Room 335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-39-2	U1-41 Detection System 1A-39-2 Room 343	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes
1A-39-3	U1-41 Detection System 1A-39-3 Room 346	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-40-1	U1-41 Detection System 1A-40-1 Room 335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-40-2	U1-41 Detection System 1A-40-2 Room 343	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0335-U1 - 335 Load Center Room, Train A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-41-1	U1-41 Detection System 1A-41-1 Room 335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-42-1	U1-41 Detection System 1A-42-1 Room 343	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-37-1	Local CO2 system in Fire Area 41 , room number 346, 600V Load Center 1I	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-38-1	Local CO2 system in Fire Area 41 , room number 346, 4160V Swgr 1A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-40-1	Local CO2 system in Fire Area 41 , room number 335, Station Service Trans. 1F 4KV Disc. SW 1A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-40-2	Local CO2 system in Fire Area 41 , room number 343, 4160V Swgr Bus 1F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-41-1	Local CO2 system in Fire Area 41 , room number 335, 600V Load Center 1D	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-41-2	Local CO2 system in Fire Area 41 , room number 335, 600V Load Center 1A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-42-1	Local CO2 system in Fire Area 41 , room number 343, 4160V Swgr 1B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-42-2	Local CO2 system in Fire Area 41 , room number 343, 4160V Swgr 1C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-229/335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-233/343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-235/346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/415-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/480-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/481-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/482-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/483-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/453-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0335-U1 - 335 Load Center Room, Train A

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/454-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/455-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/456-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/461-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/486-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/487-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/488-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/489-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/490-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-343/334-34/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-346/334-34/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-335/318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/346-S01/41-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-236/346-4/41-139: 1-139-119-16	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-06	0:00, E. of 345	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-07	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-09	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-10	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-13	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-14	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-15	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139: 1-139-119-01	0:00, W. of 335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139: 1-139-119-03	0:00, W. of 343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-116/335-8/41-139 319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139 324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/343-9/41-139 325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139 321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139 322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139 327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0335-U1 - 335 Load Center Room, Train A

### Systems and Features

#### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1VADD014	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAED051	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAED052	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAED085	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAFU-R4D	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAFU-R4E	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHE-26	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHE-27	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHJ-19	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHJ010	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
1VAHJ011	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-41-AUX BUILDING-335-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U1-41-AUX BUILDING-335-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-41-AUX BUILDING-343-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U1-41-AUX BUILDING-343-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-41-AUX BUILDING-346-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-41-NA-AREA WIDE-Procedures/Recovery Actions	-	-		-	-

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0343-U1 - 343 Load Center Room, Train A

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0346-U1 - 346 Switchgear and M-G Set Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D115	Hose Station - N1V43D115-FZ 42 Room 319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D116	Hose Station - N1V43D116-FZ 13 Room 339	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the performance-based approach Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAPW pump supplying Steam Generator 1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Performance-based approach electrical power is supplied by diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those</p>

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 1-041-U1 - Train A Switchgear & Load Center Rooms Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-23), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-23), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria), which was approved by the NRC in a letter dated 09/10/1986: .</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-25), Unit 1 Aux. Building, EI 139 ft (Fire Area 1-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li><li>• The sprinkler system existing in room 345 will serve the purpose of a water curtain to prevent the passage of fire from Area 1-042 to the adjacent fire areas via the non-rated steel hatches.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

Fire Area ID: 1-041-U1 - Train A Switchgear & Load Center Rooms Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-16), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change, installed as a result of Regulatory Guide (RG) 1.97, provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 2-16), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

### Licensing Action

Appendix R Exemption (No. 2-17), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-042 Unit 2 Cabling), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to wrap raceways 1VADD014, 1VAED051, 1VAED052, 1VAED085, 1VAHE-26, 1VAHE-27, 1VAHJ010, 1VAHJ011, 1VAHJ-19 and to replace trip device in panel Q1R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
0335-U1	335 Load Center Room, Train A	E, R, D	E, R, D, S, N	E, R, B	<p>Detection System, 1A-37-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-38-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-39-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-39-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-39-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-40-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 1A-40-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p>



## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- NPO: Required to meet NPO criteria. Detection System, 1A-41-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1A-42-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 1VADD014: -- Risk: Required to meet Risk criteria. ERFBS, 1VAED051: -- Risk: Required to meet Risk criteria. ERFBS, 1VAED052: -- Risk: Required to meet Risk criteria. ERFBS, 1VAED085: -- Risk: Required to meet Risk criteria. ERFBS, 1VAFU-R4D: -- Risk: Required to meet Risk criteria. ERFBS, 1VAFU-R4E: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHE-26: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHE-27: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHJ010: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHJ011: -- Risk: Required to meet Risk criteria. ERFBS, 1VAHJ-19: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-229/335-21/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-233/343-21/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-235/346-23/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/415-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/480-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/481-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/482-41/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-335/483-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/453-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/454-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/455-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/456-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/461-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/486-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/487-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/488-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/489-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/490-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-343/334-34/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-346/334-34/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-249/346-30/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-335/318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-345/346-42/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/346-S01/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-246/343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-116/335-8/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-117/335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-246/343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-335/339-41/42-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-343/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-346/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-346/345-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1A-37-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-38-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-40-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-40-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-41-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-41-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-42-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-42-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. One Hour Rated Cable, U1-41-AUX BUILDING-335-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. One Hour Rated Cable, U1-41-AUX BUILDING-343-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-41-AUX BUILDING-335-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-41-AUX BUILDING-343-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U1 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0343-U1	343 Load Center Room, Train A	—	—	—	—
0346-U1	346 Switchgear and M-G Set Room	—	—	—	—

Restricted transient controls, U1-41-AUX BUILDING-346-Restricted transient controls:  
-- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0335-U2	335 Load Center Room, Train A	
0343-U2	343 Load Center Room, Train A	
0346-U2	346 Switchgear and M-G Set Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0335-U2 - 335 Load Center Room, Train A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-37-1	U1-41 Detection System 1A-37-1 Room 346	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-38-1	U1-41 Detection System 1A-38-1 Room 346	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-39-1	U1-41 Detection System 1A-39-1 Room 335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-39-2	U1-41 Detection System 1A-39-2 Room 343	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes
1A-39-3	U1-41 Detection System 1A-39-3 Room 346	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-40-1	U1-41 Detection System 1A-40-1 Room 335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-40-2	U1-41 Detection System 1A-40-2 Room 343	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0335-U2 - 335 Load Center Room, Train A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-41-1	U1-41 Detection System 1A-41-1 Room 335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-42-1	U1-41 Detection System 1A-42-1 Room 343	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1A-37-1	Local CO2 system in Fire Area 41 , room number 346, 600V Load Center 1I	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-38-1	Local CO2 system in Fire Area 41 , room number 346, 4160V Swgr 1A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-40-1	Local CO2 system in Fire Area 41 , room number 335, Station Service Trans. 1F 4KV Disc. SW 1A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-40-2	Local CO2 system in Fire Area 41 , room number 343, 4160V Swgr Bus 1F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-41-1	Local CO2 system in Fire Area 41 , room number 335, 600V Load Center 1D	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-41-2	Local CO2 system in Fire Area 41 , room number 335, 600V Load Center 1A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-42-1	Local CO2 system in Fire Area 41 , room number 343, 4160V Swgr 1B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1A-42-2	Local CO2 system in Fire Area 41 , room number 343, 4160V Swgr 1C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-229/335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-233/343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-235/346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/415-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/480-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/481-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/482-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-335/483-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/453-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0335-U2 - 335 Load Center Room, Train A

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-346/454-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/455-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/456-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/461-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/486-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/487-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/488-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/489-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-346/490-41/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-343/334-34/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-346/334-34/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-249/346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-335/318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/346-S01/41-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-116/335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-236/346-4/41-139: 1-139-119-16	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-06	0:00, E. of 345	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-07	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-09	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-10	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-13	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-14	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-236/346-4/41-139: 1-139-119-15	0:00, E. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139: 1-139-119-01	0:00, W. of 335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139: 1-139-119-03	0:00, W. of 343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-116/335-8/41-139 319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-117/335-9/41-139 324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-246/343-9/41-139 325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139 321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139 322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139 327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



Fire Safety Analysis

Fire Area ID:	1-041-U2 - Train A Switchgear & Load Center Rooms	Systems and Features
Fire Zone ID:	0335-U2 - 335 Load Center Room, Train A	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-41-AUX BUILDING-335-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U1-41-AUX BUILDING-335-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-41-AUX BUILDING-343-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U1-41-AUX BUILDING-343-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0343-U2 - 343 Load Center Room, Train A

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 0346-U2 - 346 Switchgear and M-G Set Room

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D115	Hose Station - N1V43D115-FZ 42 Room 319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D116	Hose Station - N1V43D116-FZ 13 Room 339	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"><li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li><li>• Refinement of field judgments through review of design drawing/documentation; or</li><li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those</p>

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: 1-041-U2 - Train A Switchgear & Load Center Rooms Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-23), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-23), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria), which was approved by the NRC in a letter dated 09/10/1986: .</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assemblies between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-25), Unit 1 Aux. Building, EI 139 ft (Fire Area 1-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li><li>• The sprinkler system existing in room 345 will serve the purpose of a water curtain to prevent the passage of fire from Area 1-042 to the adjacent fire areas via the non-rated steel hatches.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-041-U2 - Train A Switchgear & Load Center Rooms NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-16), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change, installed as a result of Regulatory Guide (RG) 1.97, provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-16), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

### Licensing Action

Appendix R Exemption (No. 2-17), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-042 Unit 2 Cabling), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0335-U2	335 Load Center Room, Train A	E, R, D	E, R, D, S, N	E, R, B	<p>Detection System, 1A-37-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-38-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-39-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-39-2:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-39-3:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-40-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-40-2:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-41-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 1A-42-1:</p>

## Fire Safety Analysis

**Fire Area ID:** 1-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-229/335-21/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-233/343-21/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-235/346-23/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/415-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/480-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/481-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/482-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-335/483-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/453-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/454-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/455-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/456-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/461-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/486-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/487-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/488-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/489-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-346/490-41/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-343/334-34/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-346/334-34/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-236/346-4/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-249/346-30/41-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>FireBarrier, U1-FNP-N-335/318-41/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-345/346-42/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-STAIR 1/346-S01/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-246/343-9/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-116/335-8/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-117/335-9/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-236/346-4/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-246/335-9/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-246/343-9/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-335/339-41/42-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-343/339-41/42-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-346/339-41/42-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-346/345-41/42-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-1A-37-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-1A-38-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-1A-40-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-1A-40-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-1A-41-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.  -- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-1A-41-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to meet EEEE criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-041-U2 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-42-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1A-42-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. One Hour Rated Cable, U1-41-AUX BUILDING-335-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. One Hour Rated Cable, U1-41-AUX BUILDING-343-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-41-AUX BUILDING-335-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-41-AUX BUILDING-343-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
0343-U2	343 Load Center Room, Train A	—	—	—	—
0346-U2	346 Switchgear and M-G Set Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
0319-U1	319 Corridor - Train B	
0339-U1	339 Corridor - Train A	
0345-U1	345 Hallway - Train A	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0319-U1 - 319 Corridor - Train B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D115	Hose Station - N1V43D115-FZ 42 Room 319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D116	Hose Station - N1V43D116-FZ 13 Room 339	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-59-1	U1-42 Detection System 1A-59-1 Room 319	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-59-2	U1-42 Detection System 1A-59-2 Room 339	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-59-3	U1-42 Detection System 1A-59-3 Room 345	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-59-1	Preaction Sprinkler System, U1-42, Aux Building Elevation 139' West Corridor, Room 319	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-59-2	Preaction Sprinkler System, U1-42, Aux Building Elevation 139' West Corridor, Room 339	-	Yes	-- S: Required to support the use of MI cable. -- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-1A-59-3	Preaction Sprinkler System, U1-42, Aux Building Elevation 139' Hallway, Room 345	-	Yes	-- S: Required to support the use of MI cable. -- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 0319-U1 - 319 Corridor - Train B

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-228/339-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-234/345-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/416-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/476-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-345/454-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-345/489-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-319/318-42/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-339/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-345/346-42/41-139: 1-139-119-06	0:00, E. of 345	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-07	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-09	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-10	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139: 1-139-118-05	0:00, E. of 319	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139: 1-139-118-04	0:00, E. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139: 1-139-119-01	0:00, W. of 335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139: 1-139-119-03	0:00, W. of 343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139 301	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/345-S01/42-139 Elev. No. 1 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/345-S01/42-139 328	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139 312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139 315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139 313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139 321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139 322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139 327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 0319-U1 - 319 Corridor - Train B

**Systems and Features**

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-42-AUX BUILDING-319-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-42-AUX BUILDING-319-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-42-AUX BUILDING-339-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-42-AUX BUILDING-339-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-42-AUX BUILDING-345-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0339-U1 - 339 Corridor - Train A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 0345-U1 - 345 Hallway - Train A

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D115	Hose Station - N1V43D115-FZ 42 Room 319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D116	Hose Station - N1V43D116-FZ 13 Room 339	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by performance-based approach isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the performance-based approach Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1C. Main feed is performance-based approach isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Performance-based approach electrical power is supplied by diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those</p>

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C

**Inactive** Yes

**Functionally Equivalent** No

**Adequate for the Hazard** No

**Summary** Purpose:

The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.

Bases for Acceptability:

The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on

- full area detection and suppression;
- limited fire hazards;
- an assessment of in situ combustibles; and
- the substantial construction of the fire area boundary.

To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-042-U1 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> <li>• The sprinkler system in room 234 will serve as a water curtain to prevent the passage of a fire through the non-rated steel hatches. Sprinkler systems in the hatch area above and below room 234 will prevent the spread of fire from these areas into Fire Area 1-020.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-23), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria), which was approved by the NRC in a letter dated 09/10/1986: .</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-25), Unit 1 Aux. Building, EI 139 ft (Fire Area 1-042), Enclosure of one train by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-1-9901, DCP 03-1-9902, DCP 03-2-9906, DCP 90-1-6905, Re-analysis supported by Generic Letter 86-10 evaluation, Exemption for the use of the fire-rated cables, and Operator action for aligning the backup Nitrogen to the PORVs. However, note that APC correspondence and NRC SER regarding this exemption request do not credit Kaowool raceway barriers.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

Fire Area ID: 1-042-U1 - Aux Building Hallways & Corridor Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-25), Unit 1 Aux. Building, EI 139 ft (Fire Area 1-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li><li>• The sprinkler system existing in room 345 will serve the purpose of a water curtain to prevent the passage of fire from Area 1-042 to the adjacent fire areas via the non-rated steel hatches.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For the non-fire rated hatch covers:</p> <ul style="list-style-type: none"><li>• Suppression system in room 163 in the area of the subject steel hatch cover</li><li>• Analysis of safe shutdown showed that physical separation was adequate</li><li>• Detection system provided in rooms 163 and 103</li><li>• Sprinkler systems in room 345 and 454 will serve the purpose of a water curtain to prevent the passage of fire through the non-rated steel hatch.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency</p>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-042-U1 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
	evaluation(s).	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-16), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-17), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-042 Unit 2 Cabling), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-17), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-042 Unit 2 Cabling), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Previously Approved Engineering Evaluations**

- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

### Licensing Action

Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)

### Licensing Basis

Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):

- The MI cable support span is within the fire test configurations.
- The materials for the MI cable supports are bounded by the fire test configurations.
- The MI cable installation hardware is in accordance with the fire test configurations.
- The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.
- The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.
- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and replace trip device in panel Q1R42B0001A, breaker LA13.</p>
0319-U1	319 Corridor - Train B	E, R, D, S	E, R, D, S, N, rr	E, R, D, S, B	<p>Detection System, 1A-59-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>-- Rad. Release: Required to meet RR criteria.</p> <p>Detection System, 1A-59-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>-- Rad. Release: Required to meet RR criteria.</p> <p>Detection System, 1A-59-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2319/319-U2-42/U1-42-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-228/339-20/42-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-234/345-20/42-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-319/416-42/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-319/474-42/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-319/476-42/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-345/454-42/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-345/489-42/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-319/318-42/40-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-345/346-42/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-Elev 1/345-S01/42-139:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U1 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-318/319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-319/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-335/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-339/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-343/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-346/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-346/345-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U1-42-AUX BUILDING-319-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. One Hour Rated Cable, U1-42-AUX BUILDING-339-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. Restricted transient controls, U1-42-AUX BUILDING-319-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-42-AUX BUILDING-339-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-42-AUX BUILDING-345-Restricted transient controls: -- DID: Required to meet DID criteria. Water Suppression, WS-1A-59-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-1A-59-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-1A-59-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.

Fire Safety Analysis

Fire Area ID: 1-042-U1 - Aux Building Hallways & Corridor

Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0339-U1	339 Corridor - Train A	—	—	—	—
0345-U1	345 Hallway - Train A	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U2 - Aux Building Hallways & Corridor	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
0319-U2	319 Corridor - Train B	
0339-U2	339 Corridor - Train A	
0345-U2	345 Hallway - Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U2 - Aux Building Hallways & Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0319-U2 - 319 Corridor - Train B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D115	Hose Station - N1V43D115-FZ 42 Room 319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D116	Hose Station - N1V43D116-FZ 13 Room 339	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-59-1	U1-42 Detection System 1A-59-1 Room 319	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-59-2	U1-42 Detection System 1A-59-2 Room 339	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1A-59-3	U1-42 Detection System 1A-59-3 Room 345	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-59-1	Preaction Sprinkler System, U1-42, Aux Building Elevation 139' West Corridor, Room 319	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to support the use of MI cable.	Yes	-
WS-1A-59-2	Preaction Sprinkler System, U1-42, Aux Building Elevation 139' West Corridor, Room 339	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to support the use of MI cable.	Yes	-
WS-1A-59-3	Preaction Sprinkler System, U1-42, Aux Building Elevation 139' Hallway, Room 345	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 0319-U2 - 319 Corridor - Train B

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-228/339-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-234/345-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/416-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-319/476-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-345/454-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-345/489-42/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-319/318-42/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-339/300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-345/346-42/41-139: 1-139-119-06	0:00, E. of 345	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-07	0:00, S. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-09	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-345/346-42/41-139: 1-139-119-10	0:00, W. of 346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139: 1-139-118-05	0:00, E. of 319	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139: 1-139-118-04	0:00, E. of 300	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139: 1-139-119-01	0:00, W. of 335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139: 1-139-119-03	0:00, W. of 343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139 301	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/345-S01/42-139 Elev. No. 1 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/345-S01/42-139 328	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139 312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-318/319-40/42-139 315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-319/300-42/13-139 313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-335/339-41/42-139 321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-343/339-41/42-139 322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-346/339-41/42-139 327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 0319-U2 - 319 Corridor - Train B

**Systems and Features**

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-42-AUX BUILDING-319-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-42-AUX BUILDING-319-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-42-AUX BUILDING-339-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U1-42-AUX BUILDING-339-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-42-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-042-U2 - Aux Building Hallways & Corridor  
Fire Zone ID: 0339-U2 - 339 Corridor - Train A

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 0345-U2 - 345 Hallway - Train A

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D115	Hose Station - N1V43D115-FZ 42 Room 319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D116	Hose Station - N1V43D116-FZ 13 Room 339	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U2 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>

<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U2 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those</p>

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C

**Inactive** Yes

**Functionally Equivalent** No

**Adequate for the Hazard** No

**Summary** Purpose:

The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.

Bases for Acceptability:

The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on

- full area detection and suppression;
- limited fire hazards;
- an assessment of in situ combustibles; and
- the substantial construction of the fire area boundary.

To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr

## Fire Safety Analysis

**Fire Area ID:**

1-042-U2 - Aux Building Hallways & Corridor

**Engineering Evaluations**

**Compliance Basis:**

NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-042-U2 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-17), Unit 1 Non-Rad Side Corridor - Auxiliary Building, EI 121 ft (Fire Area 1-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies separating rooms 235 (Fire Area 1-023) and 234 (Fire Area 1-020), and the configuration of the in-situ combustibles in these fire areas, provide reasonable assurance that fire would not propagate into adjacent fire areas.</li> <li>• The sprinkler system in room 234 will serve as a water curtain to prevent the passage of a fire through the non-rated steel hatches. Sprinkler systems in the hatch area above and below room 234 will prevent the spread of fire from these areas into Fire Area 1-020.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-23), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria), which was approved by the NRC in a letter dated 09/10/1986: .</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-25), Unit 1 Aux. Building, EI 139 ft (Fire Area 1-042), Enclosure of one train by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-1-9901, DCP 03-1-9902, DCP 03-2-9906, DCP 90-1-6905, Re-analysis supported by Generic Letter 86-10 evaluation, Exemption for the use of the fire-rated cables, and Operator action for aligning the backup Nitrogen to the PORVs. However, note that APC correspondence and NRC SER regarding this exemption request do not credit Kaowool raceway barriers.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

Fire Area ID: 1-042-U2 - Aux Building Hallways & Corridor Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-25), Unit 1 Aux. Building, EI 139 ft (Fire Area 1-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The construction and the installation of door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li><li>• The sprinkler system existing in room 345 will serve the purpose of a water curtain to prevent the passage of fire from Area 1-042 to the adjacent fire areas via the non-rated steel hatches.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-39), Unit 1 Aux Building (Fire Area 1-004), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>For the non-fire rated hatch covers:</p> <ul style="list-style-type: none"><li>• Suppression system in room 163 in the area of the subject steel hatch cover</li><li>• Analysis of safe shutdown showed that physical separation was adequate</li><li>• Detection system provided in rooms 163 and 103</li><li>• Sprinkler systems in room 345 and 454 will serve the purpose of a water curtain to prevent the passage of fire through the non-rated steel hatch.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency</p>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-042-U2 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
	evaluation(s).	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-16), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-17), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-042 Unit 2 Cabling), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-17), Unit 1 Auxiliary Building, EI 139 ft (Fire Area 1-042 Unit 2 Cabling), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 346 (area 1-041) and 345 (area 1-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Previously Approved Engineering Evaluations**

- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

### Licensing Action

Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)

### Licensing Basis

Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):

- The MI cable support span is within the fire test configurations.
- The materials for the MI cable supports are bounded by the fire test configurations.
- The MI cable installation hardware is in accordance with the fire test configurations.
- The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.
- The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.
- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U2 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
0319-U2	319 Corridor - Train B	E, R, D, S	E, R, D, S, N, rr	E, R, S, B	Detection System, 1A-59-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 1A-59-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 1A-59-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2319/319-U2-42/U1-42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-228/339-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-234/345-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/416-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-319/476-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-345/454-42/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-345/489-42/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-319/318-42/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-345/346-42/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-318/319-40/42-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-042-U2 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-319/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-335/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-339/300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-343/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-346/339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-346/345-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U1-42-AUX BUILDING-319-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. One Hour Rated Cable, U1-42-AUX BUILDING-339-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. Procedures/Recovery Actions, U1-42-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U1-42-AUX BUILDING-319-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U1-42-AUX BUILDING-339-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-59-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-1A-59-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-1A-59-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.
0339-U2	339 Corridor - Train A	—	—	—	—
0345-U2	345 Hallway - Train A	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 1-053 - Aux Building Elevator Machine Room No. 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0502	502 Elevator Machine Room No. 2	

## Fire Safety Analysis

**Fire Area ID:** 1-053 - Aux Building Elevator Machine Room No. 2  
**Fire Zone ID:** 0502 - 502 Elevator Machine Room No. 2

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 2/502-S02/53-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-502/OUTSIDE-53/YARD-175: 1-175-125-02	0:00, E. of 502	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-502/OUTSIDE-53/YARD-175: 1-175-125-01	0:00, S. of 502	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-053 - Aux Building Elevator Machine Room No. 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>• Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>• Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>• Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>• Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-053 - Aux Building Elevator Machine Room No. 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-053 - Aux Building Elevator Machine Room No. 2	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-053 - Aux Building Elevator Machine Room No. 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-053 - Aux Building Elevator Machine Room No. 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0502	502 Elevator Machine Room No. 2	—	—	—	FireBarrier, U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 2/502-S02/53-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
0503	503 Elevator Machine Room No. 1 and Elevator No. 1 Shaft	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0503 - 503 Elevator Machine Room No. 1 and Elevator No. 1 Shaft	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-503/OUTSIDE-54/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 1/503-S01/54-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-503/OUTSIDE-54/YARD-175: 1-175-124-01	0:00, N. of 503	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-503/OUTSIDE-54/YARD-175: 1-175-124-02	0:00, S. of 503	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump (s) or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-054 - Aux Building Elevator Machine Room No. 1 and Elevator No. 1 Shaft	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0503	503 Elevator Machine Room No. 1 and Elevator No. 1 Shaft	—	—	—	FireBarrier, U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 1/503-S01/54-175: -- Barrier: Required to support a fire area boundary evaluation.

Fire Safety Analysis

Fire Area ID:	1-055 - Containment	Fire Area Definition
Compliance Basis:	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-CTMT	Containment, Unit 1	

## Fire Safety Analysis

**Fire Area ID:** 1-055 - Containment  
**Fire Zone ID:** 1-CTMT - Containment, Unit 1

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1T43V001	Hose Station - N1T43V001-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V002	Hose Station - N1T43V002-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V003	Hose Station - N1T43V003-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V004	Hose Station - N1T43V004-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V005	Hose Station - N1T43V005-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V006	Hose Station - N1T43V006-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V007	Hose Station - N1T43V007-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1T43V008	Hose Station - N1T43V008-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-22-1	U1-55 Detection System 1A-22-1 Room CTMT	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-129/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-131/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-189/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-194/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-241/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-241/CTMT-6/55-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-241/CTMT-6/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-196/CTMT-1/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-111/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-112/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-125/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-172/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-182/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-055 - Containment	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-CTMT - Containment, Unit 1	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-183/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/CTMT-4/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-223/CTMT-1/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-333/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-334/CTMT-34/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-347/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-409/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-418/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-429/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-105.5	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-SE-184/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-237/CTMT-4/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-105.5	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-CTMT/OUTSIDE-55/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-429/CTMT-4/55-155 467	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-55-CTMT-CTMT-RCP Oil Collection System	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-055 - Containment  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>• Unit 1: Normal letdown is isolated using performance-based approach orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is performance-based approach isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are performance-based approach isolated using Train A PORV and Train B PORV or the PORV block valves. The RCS to RHR high/low pressure interface is performance-based approach isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>• Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>• Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump(s) or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>• Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-055 - Containment  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is performance-based approach prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV, Train B PORV or aux spray for pressure reduction and performance-based approach Pressurizer Heater Group B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - Performance-based approach RCS pressure is monitored. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2/Loop 3 temperature is monitored. 5. SG Pressure - Performance-based approach Steam Generator 1A/1B/1C} pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-055 - Containment  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"><li>• Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li><li>• Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li></ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in Containment. There are no automatic suppression systems in Containment. Equipment is qualified for harsh environment, including water spray and vital equipment is located above the sump submergence level that would be expected during fire suppression activities. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-055 - Containment	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-055 - Containment	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (CB), Unit 1 and 2 Containment Buildings (Fire Areas 1-055, 2-055) 20 feet separation without intervening combustibles (III.G.2.d criteria)
<b>Licensing Basis</b>	<p>Exemption request per 06/18/1982 and 07/27/1982 APC letters to the NRC provides the following justification for the lack of 20 feet horizontal distance separation between safe shutdown circuits with no intervening combustibles, which was approved by the NRC in a letter dated 12/30/1983:</p> <p>For pressurizer vent paths:</p> <ul style="list-style-type: none"><li>• Redundant cables are routed in separate enclosures; within the enclosures, a hot short could not inadvertently open the PORVs.</li><li>• Alternate means of depressurization is provided by the pressurizer auxiliary spray which is separated from redundant equipment by 20 feet with no intervening combustibles.</li></ul> <p>For reactor vessel head vent system flow paths:</p> <ul style="list-style-type: none"><li>• Redundant cables are routed in separate enclosures; within the enclosures, a hot short could not inadvertently open the head vent valves.</li></ul> <p>For pressurizer pressure and level instrumentation:</p> <ul style="list-style-type: none"><li>• One train of primary system pressure indication is available with cables horizontally separated by more than 20 feet free of intervening combustibles from redundant counterparts</li></ul> <p>Furthermore, for all areas of concern, smoke detection and manual hose stations are provided in the area and access is restricted during plant operations reducing the likelihood of a transient combustible exposure fire. Also Containment cables are qualified to IEEE Standard 383, and are routed in conduit in the vicinity of the equipment, and are protected with overcurrent devices.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-055 - Containment  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-CTMT	Containment, Unit 1	—	E, R, N	D, B	Detection System, 1A-22-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-E-129/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-131/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-189/CTMT-6/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-194/CTMT-6/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-241/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-241/CTMT-6/55-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-241/CTMT-6/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-196/CTMT-1/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-111/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-112/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-125/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-172/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-182/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-183/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/CTMT-4/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-223/CTMT-1/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-333/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-334/CTMT-34/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-347/CTMT-35/55-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-055 - Containment	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-409/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-418/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-429/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-105.5: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-SE-184/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-237/CTMT-4/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-105.5: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-CTMT/OUTSIDE-55/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. RCP Oil Collection System, U1-55-CTMT-CTMT-RCP Oil Collection System: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U1 - Unit 1 Cable Tunnel - Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
1-075-U1	Unit 1 Cable Tunnel - Train A	

## Fire Safety Analysis

**Fire Area ID:** 1-075-U1 - Unit 1 Cable Tunnel - Train A  
**Fire Zone ID:** 1-075-U1 - Unit 1 Cable Tunnel - Train A

**Systems and Features**

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2Y43D001A	Hose Station - N2Y43D001A-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001B	Hose Station - N2Y43D001B-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001C	Hose Station - N2Y43D001C-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001D	Hose Station - N2Y43D001D-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001E	Hose Station - N2Y43D001E-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001F	Hose Station - N2Y43D001F-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001G	Hose Station - N2Y43D001G-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001H	Hose Station - N2Y43D001H-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001J	Hose Station - N2Y43D001J-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001K	Hose Station - N2Y43D001K-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001L	Hose Station - N2Y43D001L-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001M	Hose Station - N2Y43D001M-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001N	Hose Station - N2Y43D001N-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U1 - Unit 1 Cable Tunnel - Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-075-U1 - Unit 1 Cable Tunnel - Train A	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1 234-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2 234-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-75-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-075-U1 - Unit 1 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 1-075-U1 - Unit 1 Cable Tunnel - Train A

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B ,service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U1 - Unit 1 Cable Tunnel - Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-075-U1 - Unit 1 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-075-U1 - Unit 1 Cable Tunnel - Train A NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-18), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 1-075), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provided a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-18), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 1-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-33), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U1 - Unit 1 Cable Tunnel - Train A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-23), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train A (Fire Area 1-075), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.
- A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U1 - Unit 1 Cable Tunnel - Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
1-075-U1	Unit 1 Cable Tunnel - Train A	—	—	R, B	<p>FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-75-NA-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U2 - Unit 1 Cable Tunnel - Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
1-075-U2	Unit 1 Cable Tunnel - Train A	

## Fire Safety Analysis

**Fire Area ID:** 1-075-U2 - Unit 1 Cable Tunnel - Train A  
**Fire Zone ID:** 1-075-U2 - Unit 1 Cable Tunnel - Train A

**Systems and Features**

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2Y43D001A	Hose Station - N2Y43D001A-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001B	Hose Station - N2Y43D001B-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001C	Hose Station - N2Y43D001C-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001D	Hose Station - N2Y43D001D-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001E	Hose Station - N2Y43D001E-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001F	Hose Station - N2Y43D001F-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001G	Hose Station - N2Y43D001G-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001H	Hose Station - N2Y43D001H-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001J	Hose Station - N2Y43D001J-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001K	Hose Station - N2Y43D001K-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001L	Hose Station - N2Y43D001L-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001M	Hose Station - N2Y43D001M-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001N	Hose Station - N2Y43D001N-FZ 75 Room TUNNEL A	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U2 - Unit 1 Cable Tunnel - Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-075-U2 - Unit 1 Cable Tunnel - Train A	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1 234-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2 234-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-75-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-075-U2 - Unit 1 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-075-U2 - Unit 1 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U2 - Unit 1 Cable Tunnel - Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-075-U2 - Unit 1 Cable Tunnel - Train A NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-18), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 1-075), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provided a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-18), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 1-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-33), Unit 1 Auxiliary Building Cable Chase Train A (Fire Area 1-031), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U2 - Unit 1 Cable Tunnel - Train A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-23), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train A (Fire Area 1-075), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.
- A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-075-U2 - Unit 1 Cable Tunnel - Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-075-U2	Unit 1 Cable Tunnel - Train A	—	—	R, B	FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL A/DGB-1-075/56A-155-2: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-75-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
1-076-U1	Unit 1 Cable Tunnel - Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1 235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2 235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-76-NA-76-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U1-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-076-U1 - Unit 1 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 1A/1B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored..	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	

## Fire Safety Analysis

**Fire Area ID:** 1-076-U1 - Unit 1 Cable Tunnel - Train B

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	1-076-U1 - Unit 1 Cable Tunnel - Train B NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-29), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-30), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 1-076), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of the pressurizer PORVs and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-29), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train B (Fire Area 1-076), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805, Section 4.2.4.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-29), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train B (Fire Area 1-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Fire resistant coating on a door has been placed in a surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U1 - Unit 1 Cable Tunnel - Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q1R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
1-076-U1	Unit 1 Cable Tunnel - Train B	—	—	E, R, B	<p>FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U1-76-NA-76-Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U1-76-NA-76-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U2 - Unit 1 Cable Tunnel - Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
1-076-U2	Unit 1 Cable Tunnel - Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U2 - Unit 1 Cable Tunnel - Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-076-U2 - Unit 1 Cable Tunnel - Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1 235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2 235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-076-U2 - Unit 1 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-076-U2 - Unit 1 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U2 - Unit 1 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-076-U2 - Unit 1 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: 1-076-U2 - Unit 1 Cable Tunnel - Train B Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-29), Unit 1 Auxiliary Building Cable Chase Train B (Fire Area 1-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Fire resistant coating on a door has been placed in a surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-30), Unit 1 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 1-076), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• Manual operator actions can be performed to regain control of the pressurizer PORVs and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U2 - Unit 1 Cable Tunnel - Train B	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-29), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train B (Fire Area 1-076), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805, Section 4.2.4.</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-29), Unit 1 Auxiliary Building to Diesel Generator Building Cable Tunnel Train B (Fire Area 1-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Fire resistant coating on a door has been placed in a surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-076-U2 - Unit 1 Cable Tunnel - Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-076-U2	Unit 1 Cable Tunnel - Train B	—	—	E, B	FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-CST	Condensate Storage Tank	

## Fire Safety Analysis

Fire Area ID: 1-077 - Condensate Storage Tank  
Fire Zone ID: 1-CST - Condensate Storage Tank

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>• Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>• Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>• Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>• Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 1-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-CST	Condensate Storage Tank	—	—	—	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-RWMT	Reactor Makeup Storage Tank	

## Fire Safety Analysis

Fire Area ID: 1-078 - Reactor Makeup Storage Tank  
Fire Zone ID: 1-RWMT - Reactor Makeup Storage Tank

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>• Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>• Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>• Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>• Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-RWMT	Reactor Makeup Storage Tank	—	—	—	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-079 - Refueling Water Storage Tank	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-RWST	Refueling Water Storage Tank	



## Fire Safety Analysis

Fire Area ID: 1-079 - Refueling Water Storage Tank  
Fire Zone ID: 1-RWST - Refueling Water Storage Tank

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

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- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-079 - Refueling Water Storage Tank	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-RWST	Refueling Water Storage Tank	—	—	—	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-080A	Main Transformer No.3	
1-080B	Main Transformer No.2	
1-080C	Main Transformer No.1	
1-080D	Main Transformer (Spare)	
1-080E	Unit Aux Transformer No. 1A	
1-080F	Unit Aux Transformer (Spare Cubicle)	
1-080G	Startup Aux Transformer No. 1A	
1-080H	Startup Aux Transformer No. 1B	
1-080J	Startup Aux Transformer (Spare)	
1-080K	Low Voltage Switchyard - General Area, Unit 1	

## Fire Safety Analysis

Fire Area ID: 1-080 - Low Voltage Switchyard - Unit 1  
Fire Zone ID: 1-080A - Main Transformer No.3

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-64-1	Automatic Deluge System, U1-80, Main Transformer #3, Room 0080A	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80A-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 1-080 - Low Voltage Switchyard - Unit 1  
Fire Zone ID: 1-080B - Main Transformer No.2

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-64-2	Automatic Deluge System, U1-80, Main Transformer #2, Room 0080B	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80B-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

Fire Area ID: 1-080 - Low Voltage Switchyard - Unit 1  
Fire Zone ID: 1-080C - Main Transformer No.1

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-66-1	Automatic Deluge System, U1-80, Main Transformer #1, Room 0080C	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80C-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80C-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Fire Zone ID:** 1-080D - Main Transformer (Spare)

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-66-2	Automatic Deluge System, U1-80, Main Transformer Spare, Room 0080D	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80D-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80D-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-080 - Low Voltage Switchyard - Unit 1	Systems and Features
Fire Zone ID:	1-080E - Unit Aux Transformer No. 1A	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80E-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80E-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Fire Zone ID:** 1-080F - Unit Aux Transformer (Spare Cubicle)

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-68-1	Automatic Deluge System, U1-80, Unit Auxiliary Transformer (Spare Cubicle), Room 0080F	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80F-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80F-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Fire Zone ID:** 1-080G - Startup Aux Transformer No. 1A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-67-1	Automatic Deluge System, U1-80, Startup Aux Transformer No. 1A, Room 0080G	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80G-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80G-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Fire Zone ID:** 1-080H - Startup Aux Transformer No. 1B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1TR-69-1	Automatic Deluge System, U1-80, Startup Transformer No. 1B, Room 0080H	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80H-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80H-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-080 - Low Voltage Switchyard - Unit 1	Systems and Features
Fire Zone ID:	1-080J - Startup Aux Transformer (Spare)	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80J-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Fire Zone ID:** 1-080K - Low Voltage Switchyard - General Area, Unit 1

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-U1 TURB/80K-85B/159-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-80K/OUTSIDE-U1-80/U2-80-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-80-NA-80K-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-80-NA-80K-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>• Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray are not operating. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>• Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>• Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>• Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. Each outdoor deluge system provides local protection for individual transformers, and are designed (using curbs, etc.) so water will remain in the vicinity of the affected equipment. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-080A	Main Transformer No.3	E	—	E	Curbs, U1-80-NA-80A-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-64-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080B	Main Transformer No.2	E	—	E	Curbs, U1-80-NA-80B-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-64-2: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080C	Main Transformer No.1	E	—	E	Combustibles and flammable liquid control, U1-80-NA-80C-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80C-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-66-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080D	Main Transformer (Spare)	E	—	E	Combustibles and flammable liquid control, U1-80-NA-80D-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80D-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-66-2: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080E	Unit Aux Transformer No. 1A	—	—	E	Combustibles and flammable liquid control, U1-80-NA-80E-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80E-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080F	Unit Aux Transformer (Spare Cubicle)	E	—	E	Combustibles and flammable liquid control, U1-80-NA-80F-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80F-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-68-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080G	Startup Aux Transformer No. 1A	E	—	E	Combustibles and flammable liquid control, U1-80-NA-80G-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80G-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-67-1: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-080 - Low Voltage Switchyard - Unit 1  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-080H	Startup Aux Transformer No. 1B	E	—	E	Combustibles and flammable liquid control, U1-80-NA-80H-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80H-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1TR-69-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080J	Startup Aux Transformer (Spare)	—	—	E	Combustibles and flammable liquid control, U1-80-NA-80J-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation.
1-080K	Low Voltage Switchyard - General Area, Unit 1	—	—	E, B	Combustibles and flammable liquid control, U1-80-NA-80K-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U1-80-NA-80K-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/80K-85B/159-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-80K/OUTSIDE-U1-80/U2-80-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U1 - Turbine Building Battery Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
1-081-U1	Turbine Building Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U1 - Turbine Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-081-U1 - Turbine Building Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-4-1	U1-81 Detection System 1T-4-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-81/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-81/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137 T001	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-081-U1 - Turbine Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 1-081-U1 - Turbine Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-081-U1 - Turbine Building Battery Room

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U1 - Turbine Building Battery Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
1-081-U1	Turbine Building Battery Room	—	E, R, S, N	—	Detection System, 1T-4-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-81/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-81/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-81/85A-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U2 - Turbine Building Battery Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
1-081-U2	Turbine Building Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U2 - Turbine Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-081-U2 - Turbine Building Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-4-1	U1-81 Detection System 1T-4-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-81/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-81/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137 T001	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-081-U2 - Turbine Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-081-U2 - Turbine Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U2 - Turbine Building Battery Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-081-U2 - Turbine Building Battery Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-081-U2	Turbine Building Battery Room	—	E, R, S, N	—	Detection System, 1T-4-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-81/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-81/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-81/85A-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-082	Lube Oil Storage Room	

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Fire Zone ID:** 1-082 - Lube Oil Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-82/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-82/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-82/83-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-82/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-82/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/U1 TURB-82/85A-137 T009	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable & combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-082 - Turbine Building Lube Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-082	Lube Oil Storage Room	—	—	—	FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-82/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-82/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-82/83-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-82/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-82/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 1-083 - Turbine Building Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-083	Oil Storage Room	

## Fire Safety Analysis

Fire Area ID: 1-083 - Turbine Building Oil Storage Room  
Fire Zone ID: 1-083 - Oil Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-83/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-83/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-82/83-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-83/85C-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-83/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/U1 TURB-83/85A-137 T003	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-083 - Turbine Building Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-083 - Turbine Building Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-083 - Turbine Building Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable &amp; combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-083 - Turbine Building Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-083 - Turbine Building Oil Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-083	Oil Storage Room	—	—	—	FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-83/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-83/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-82/83-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-83/85C-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-83/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-086 - Turbine Building Auxiliary Steam Generator  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-086	Auxiliary Steam Generator	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-086 - Turbine Building Auxiliary Steam Generator	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-086 - Auxiliary Steam Generator	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T19	Turb. Bldg.-155'-Aux. Boiler Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-81/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-86/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-86/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85B/86-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-86/85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-86/85B-155 T103	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85G-155 T102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-086 - Turbine Building Auxiliary Steam Generator  
**Fire Zone ID:** 1-086 - Auxiliary Steam Generator

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 1-086 - Turbine Building Auxiliary Steam Generator  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-086 - Turbine Building Auxiliary Steam Generator  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-086 - Turbine Building Auxiliary Steam Generator  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

## Fire Safety Analysis

**Fire Area ID:** 1-086 - Turbine Building Auxiliary Steam Generator  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-086	Auxiliary Steam Generator	—	—	—	FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-81/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-86/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-86/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-86/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-86/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-85B/86-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-86/85G-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0107	107 Combustible Storage/Filter Unit Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-090 - Aux Building Combustible Storage & Filter Unit Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0107 - 107 Combustible Storage/Filter Unit Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A8	Aux. Bldg-83'-Storage Room Rm 107	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-132-7	U1-1 Detection System 1A-132-7 Room 107	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-132-1	Preaction Sprinkler System, U1-90, SGBD Panel Rooms and Drum Storage Rooms , Room 107	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-107/165-90/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-107/106-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-107/103-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-107/108-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-107/OUTSIDE-90/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-107/106-90/1-83: 1-083-111-04	0:00, W. of 106	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-107/103-90/1-83: 1-083-111-01	0:00, S. of 103	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-107/103-90/1-83: 1-083-111-02	0:00, N. of 107	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-107/108-90/1-83: 1-083-111-03	0:00, S. of 107	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-107/103-90/1-83 102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—



## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Fire Zone ID:** 0107 - 107 Combustible Storage/Filter Unit Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-90-AUX BUILDING-107-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 1-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0107	107 Combustible Storage/Filter Unit Room	E	E, R, D	E, B	Detection System, 1A-132-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-107/165-90/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-107/106-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-107/103-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-107/108-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-107/OUTSIDE-90/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-90-AUX BUILDING-107-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-132-1: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0420	420 Drum Storage/Combustible Storage Room	
0421	421 Drumming Station/Combustible Storage Room	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-092 - Drumming Station & Storage & Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0420 - 420 Drum Storage/Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-135-1	U1-92 Detection System 1A-135-1 Room 420	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
1A-135-2	U1-92 Detection System 1A-135-2 Room 421	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-330/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-331/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-351/420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-605/421-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-609/421-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-419/420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-421/422-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-421/408-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-420/445-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-421/445-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/420-S08/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-420/478-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-467/421-4/92-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 10/421-S10/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-STAIR 8/420-S08/92-155: 1-155-131-01	0:00, N. of 420	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-467/421-4/92-165: 1-155-131-03	0:00, W. of 467	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	1-092 - Drumming Station & Storage & Combustible Storage Room	Systems and Features
Fire Zone ID:	0420 - 420 Drum Storage/Combustible Storage Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-421/422-92/4-155 461	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Fire Zone ID:** 0421 - 421 Drumming Station/Combustible Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable & combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0420	420 Drum Storage/Combustible Storage Room	—	E, R, D	—	<p>Detection System, 1A-135-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 1A-135-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-330/420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-331/420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-351/420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-605/421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-609/421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-419/420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-421/422-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-421/408-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-420/445-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-421/445-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-STAIR 8/420-S08/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-420/478-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-467/421-4/92-165:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-STAIR 10/421-S10/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>
0421	421 Drumming Station/Combustible Storage Room	—	—	—	—



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-094 - Aux Building Combustible Storage Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
0167	167 Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-094 - Aux Building Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0167 - 167 Combustible Storage Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-27-1	U1-94 Detection System 1A-27-1 Room 167	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-21-1	Wet Pipe Sprinkler System, U1-94, Aux Building Elevation 100' Storage Room #167, Room 167	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-108/167-1/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-167/225-94/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-167/226-94/19-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-167/168-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-167/164-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-167/185-94/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-167/166-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-167/185-94/6-100: 1-100-113-01	0:00, N. of 185	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-167/185-94/6-100: 1-100-113-04	0:00, N. of 185	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-167/185-94/6-100 166	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-094 - Aux Building Combustible Storage Room  
**Fire Zone ID:** 0167 - 167 Combustible Storage Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 1-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-094 - Aux Building Combustible Storage Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 1-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-094 - Aux Building Combustible Storage Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0167	167 Combustible Storage Room	D	E, R, S, N	—	Detection System, 1A-27-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-108/167-1/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-167/225-94/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-167/226-94/19-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-167/168-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-167/164-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-167/185-94/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-167/166-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-21-1: -- DID: Required to meet DID criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0171	171 Storage Room/Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-095 - Aux Building Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0171 - 171 Storage Room/Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-118-3	U1-95 Detection System 1A-118-3 Room 171	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-3	Precision Sprinkler System, U1-95, Aux Building Elevation 100' North East Corridor, Room 171	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-111/171-1/95-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-Ceiling-171/217-95/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-171/170-95/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-183/171-1/95-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-171/182-95/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-171/183-95/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-171/170-95/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-171/183-95/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-172/171-5/95-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-172/171-5/95-100 191	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Fire Zone ID:** 0171 - 171 Storage Room/Combustible Storage Room

**Systems and Features**

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, Acceptability Determination of Penetration Seals #24-100-32; 09-139-9; and 02-139-29

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

The purpose of this evaluation is to document the acceptability of FNP Unit 1 Penetration Seals #24-100-32, 09-139-9, and 02-139-29 as 3-hour rated fire barriers.

Bases for Acceptability:

The evaluation demonstrates that the penetrations have been evaluated as acceptable 3-hour rated penetrations based on the features of construction as compared to test results furnished by various recognized industry tests.

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Summary**

Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary**

Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

<b>Licensing Action</b>	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"><li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li><li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li><li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>



## Fire Safety Analysis

**Fire Area ID:** 1-095 - Aux Building Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0171	171 Storage Room/Combustible Storage Room	E	E, R, D	—	<p>Detection System, 1A-118-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-111/171-1/95-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-171/217-95/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-171/170-95/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-183/171-1/95-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-171/182-95/5-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-171/183-95/1-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-171/170-95/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-171/183-95/1-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-172/171-5/95-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-1A-118-3:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0179	179 Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-096 - Aux Building Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0179 - 179 Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-118-6	U1-96 Detection System 1A-118-6 Room 179	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1A-118-6	Precision Sprinkler System, U1-96, Aux Building Elevation 100' Valve Room, Room 179	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-179/231-96/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-179/OUTSIDE-96/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/177-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/178-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-179/187-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-179/180-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-179/177-96/4-100: 1-100-114-03	0:00, S. of 177	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-179/178-96/4-100: 1-100-114-04	0:00, S. of 178	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-179/187-96/4-100: 1-100-114-05	0:00, S. of 179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-179/180-96/4-100: 1-100-114-01	0:00, W. of 179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-179/180-96/4-100 184	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Fire Zone ID:** 0179 - 179 Combustible Storage Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

**Licensing Action** Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

**Licensing Basis** Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:

- The fire severity in the affected rooms is less than 30 minutes for all cases.
- A sprinkler system is installed in rooms 161, 179, 2161, and 2179
- Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 1-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0179	179 Combustible Storage Room	E	E, R, D	—	Detection System, 1A-118-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-179/231-96/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-179/OUTSIDE-96/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-179/177-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-179/178-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-179/187-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-179/180-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1A-118-6: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0404	404 Filter Hatch Room/Combustible Storage Area	

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Fire Zone ID:** 0404 - 404 Filter Hatch Room/Combustible Storage Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-112-1	U1-97 Detection System 1A-112-1 Room 404	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2404/404-U2-97/U1-97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-301/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-302/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-303/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-304/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-305/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-311/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-313/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-314/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-315/404-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-404/405-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/441-97/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-404/405-97/4-155: 1-155-122-06	0:00, E. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-404/405-97/4-155: 1-155-122-07	0:00, E. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155: 1-155-122-04	0:00, S. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155: 1-155-122-05	0:00, S. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-01	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-02	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-404/409-97/4-155: 1-155-122-03	0:00, W. of 404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Fire Zone ID:** 0404 - 404 Filter Hatch Room/Combustible Storage Area

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2404/404-U2-97/U1-97-155 496	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-404/409-97/4-155 408	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-097 - Filter Hatch Room & Combustible Storage Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D	Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0404	404 Filter Hatch Room/Combustible Storage Area	—	E, R	—	<p>Detection System, 1A-112-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-S-2404/404-U2-97/U1-97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-301/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-302/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-303/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-304/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-305/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-311/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-313/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-314/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-315/404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-404/405-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-404/409-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-404/409-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-404/441-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 1-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
0447	447 Caskwash Storage Area/Combustible Storage Area	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-098 - Caskwash Storage & Combustible Storage Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	0447 - 447 Caskwash Storage Area/Combustible Storage Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-107-11	U1-98 Detection System 1A-107-11 Room 447	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-447/446-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-447/445-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-447/348-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-447/448-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-447/446-98/4-155: 1-155-132-02	0:00, E. of 447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-447/448-98/4-155: 1-155-132-01	0:00, W. of 447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-447/348-98/4-155 434	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-098 - Caskwash Storage & Combustible Storage Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
0447	447 Caskwash Storage Area/Combustible Storage Area	—	E, R, D	—	Detection System, 1A-107-11: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-447/446-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-447/445-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-447/348-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-447/448-98/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-DU-DGRWIS-A	Diesel Building to RWIS Ductbank, Unit 1, Train A	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A  
**Fire Zone ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-A/68-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-1-DU-DGRWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGRWIS-A	Diesel Building to RWIS Ductbank, Unit 1, Train A	—	—	—	FireBarrier, U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-A/68-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-1-DU-DGRWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-DU-DGRWIS-B	Diesel Building to RWIS Ductbank, Unit 1, Train B	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B  
**Fire Zone ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-B/67-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-1-DU-DGRWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-AII-NA/OUTSIDE-1-DU-DGRWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGRWIS-B	Diesel Building to RWIS Ductbank, Unit 1, Train B	—	—	—	FireBarrier, U0-FNP-E-NA/RVR INTK-1-DU-DGRWIS-B/67-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-1-DU-DGRWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-AII-NA/OUTSIDE-1-DU-DGRWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
1-DU-DGSWIS-A-U1	Diesel Building to SWIS Ductbank, Unit 1, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/DGB-1-DU-DGSWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-DU-DGSWIS-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	D	Modifications: -- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.
1-DU-DGSWIS-A-U1	Diesel Building to SWIS Ductbank, Unit 1, Train A	—	—	R, B	FireBarrier, U0-FNP-N-NA/DGB-1-DU-DGSWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-DU-DGSWIS-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
1-DU-DGSWIS-A-U2	Diesel Building to SWIS Ductbank, Unit 1, Train A	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A  
**Fire Zone ID:** 1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/DGB-1-DU-DGSWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-A-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGSWIS-A-U2	Diesel Building to SWIS Ductbank, Unit 1, Train A	—	—	—	FireBarrier, U0-FNP-N-NA/DGB-1-DU-DGSWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-1-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
1-DU-DGSWIS-B-U1	Diesel Building to SWIS Ductbank, Unit 1, Train B	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B  
**Fire Zone ID:** 1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/DGB-1-DU-DGSWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-DU-DGSWIS-B-NA-AREA WIDE-Procedures/Recovery Actions	-	-		Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-B-U1 - Diesel Building to SWIS Ductbank, Unit 1, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGSWIS-B-U1	Diesel Building to SWIS Ductbank, Unit 1, Train B	—	—	—	FireBarrier, U0-FNP-N-NA/DGB-1-DU-DGSWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
1-DU-DGSWIS-B-U2	Diesel Building to SWIS Ductbank, Unit 1, Train B	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B  
**Fire Zone ID:** 1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/DGB-1-DU-DGSWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGSWIS-B-U2 - Diesel Building to SWIS Ductbank, Unit 1, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGSWIS-B-U2	Diesel Building to SWIS Ductbank, Unit 1, Train B	—	—	—	FireBarrier, U0-FNP-N-NA/DGB-1-DU-DGSWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/DGB-1-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-DU-DGVB-A	Diesel Building to Valve Box Ductbanks, Train A	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A  
**Fire Zone ID:** 1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-AII-NA/OUTSIDE-DU-DGVB-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/NA-1-SVB3-A/DU-DGVB-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/NA-DU-DGVB-A/1-SVB4-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-A/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/NA-1-SVB1-A/DU-DGVB-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGVB-A/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/NA-DU-DGVB-A/1-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or performance-based approach Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

## Fire Safety Analysis

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<b>Fire Area ID:</b>	1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

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### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGVB-A - Diesel Building to Valve Box Ductbanks, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGVB-A	Diesel Building to Valve Box Ductbanks, Train A	—	—	—	FireBarrier, U1-FNP-AII-NA/OUTSIDE-DU-DGVB-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/NA-1-SVB3-A/DU-DGVB-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/NA-DU-DGVB-A/1-SVB4-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-A/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/NA-1-SVB1-A/DU-DGVB-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGVB-A/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/NA-DU-DGVB-A/1-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-DU-DGVB-B	Diesel Building to Valve Box Ductbanks, Train B	

## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B  
**Fire Zone ID:** 1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-AII-NA/OUTSIDE-DU-DGVB-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-B/1-SVB3-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/DGB-DU-DGVB-B/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/NA-1-SVB1-B/DU-DGVB-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/DGB-DU-DGVB-B/56B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGVB-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/NA-1-SVB4-B/DU-DGVB-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/NA-DU-DGVB-B/1-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or performance-based approach Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

## Fire Safety Analysis

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<b>Fire Area ID:</b>	1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

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### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-DU-DGVB-B - Diesel Building to Valve Box Ductbanks, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-DU-DGVB-B	Diesel Building to Valve Box Ductbanks, Train B	—	—	—	FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGVB-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-B/1-SVB3-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-B/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/NA-1-SVB1-B/DU-DGVB-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-B/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/DGB-DU-DGVB-B/56B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGVB-B/56A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/NA-1-SVB4-B/DU-DGVB-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/NA-DU-DGVB-B/1-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-EMBED-AB	Embedded Conduit, Auxiliary Building, Unit 1	

Fire Safety Analysis

Fire Area ID:	1-EMBED-AB - Aux Building Embedded Conduit	Systems and Features
Fire Zone ID:	1-EMBED-AB - Embedded Conduit, Auxiliary Building, Unit 1	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained in this area due to embedded conduits. Cables in embedded conduits are protected from adverse conditions occurring due to fire suppression effects. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



Fire Safety Analysis

Fire Area ID:	1-EMBED-AB - Aux Building Embedded Conduit	Required Systems and Features
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-EMBED-AB	Embedded Conduit, Auxiliary Building, Unit 1	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S01 - Stairwell No. 1	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-S01	Stairwell No. 1	

## Fire Safety Analysis

**Fire Area ID:** 1-S01 - Stairwell No. 1  
**Fire Zone ID:** 1-S01 - Stairwell No. 1

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A15	Aux. Bldg-100'-Comp. Cool. Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A15-1	Aux. Bldg-100'-Comp. Cool. Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A18	Aux. Bldg-121'-West Corridor – North end-Non Rad	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-1	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A20-2	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A24	Aux. Bldg-155'-Outside of Control Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A27	Aux. Bldg-139'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A28	Aux. Bldg-121'-West Corridor NONRAD	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A4	Aux. Bldg-155'-Dosimetry Lab	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1V43D107	Hose Station - N1V43D107-FZ 6 Room 189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D108	Hose Station - N1V43D108-FZ 6 Room 185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D112	Hose Station - N1V43D112-FZ 42 Room 345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D120	Hose Station - N1V43D120-FZ 4 Room 454	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1V43D125	Hose Station - N1V43D125-FZ 20 Room 234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-51-5	U1-S01 Detection System 1A-51-5 Room Stair 01	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-128/Stair 1-1/S01-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 1/Stair 1-S01/S01-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/461-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-190/STAIR 1-6/S01-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-241/STAIR 1-6/S01-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/234-S01/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/454-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/234-S01/20-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-S01 - Stairwell No. 1  
**Fire Zone ID:** 1-S01 - Stairwell No. 1

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-STAIR 1/345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/346-S01/41-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/454-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/241-S01/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/241-S01/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/462-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Stair 1/241-S01/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/241-S01/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/462-S01/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-249/STAIR 1-30/S01-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-249/Stair 1-30/S01-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 1/503-S01/54-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-W-STAIR 1/Elev 1-S01/S01-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 1/Elev 1-S01/S01-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 1/Elev 1-S01/S01-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2128/STAIR 1-1/S01-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-STAIR 1/185-S01/6-100 169	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/185-S01/6-100 Elev. No. 1 (1)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/234-S01/20-121 Elev. No. 1 (2)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/345-S01/42-139 Elev. No. 1 (3)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 1/454-S01/4-155 Elev. No. 1 (4)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/234-S01/20-121 225	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/345-S01/42-139 328	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/454-S01/4-155 439	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/190-S01/6-100 170	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Stair 1/241-S01/6-127 330	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-S01 - Stairwell No. 1	Systems and Features
Fire Zone ID:	1-S01 - Stairwell No. 1	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-S01-AUX BUILDING-STAIR 01-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-S01 - Stairwell No. 1  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-S01 - Stairwell No. 1  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b> 1-S01 - Stairwell No. 1		<b>Engineering Evaluations</b>
<b>Compliance Basis:</b> Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach		
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"><li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li><li>• Refinement of field judgments through review of design drawing/documentation; or</li><li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S01 - Stairwell No. 1	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

		Previously Approved Engineering Evaluations
<b>Fire Area ID:</b>	1-S01 - Stairwell No. 1	
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-38), Unit 1 Auxiliary Building, Elevations 100, 127, 139, 155, and 175 ft. (Fire Area 1-006), lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of a rated 3 hour boundary between fire areas 1-006 and 1-S01, which was approved by the NRC in a letter dated 09/10/1986:</p> <p>A non fire-rated, watertight door # 170 exists between fire area 1-006, room 190 and fire area 1-S01, Stairwell # 1; and a non fire-rated, pressure tight door # 330 exists between fire area 1-006, room 241 and fire area 1-S01, Stairwell # 1.</p> <ul style="list-style-type: none"><li>• These doors are normally maintained closed.</li><li>• Smoke detection is provided in rooms on both sides of these doors. These system alarms locally and are annunciated in the main control room and will provide early warning of a pending fire condition, prompting a fire brigade response.</li><li>• An automatic fire suppression system is provided in room 190.</li><li>• Portable extinguishers and fire hose cabinets are available outside of the stairwell # 1 at each elevation except 175 feet for fire brigade's use.</li><li>• The combustible loading in room 241 (main steam valve room) is less than 30 minutes and access to this area during plant operation is restricted. Based on the configuration and fire protection provided, a fire on either side of these doors will not propagate to the adjacent fire area.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

**Fire Area ID:** 1-S01 - Stairwell No. 1  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-S01	Stairwell No. 1	—	E, R, D	E, B	Detection System, 1A-51-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-128/Stair 1-1/S01-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 1/Stair 1-S01/S01-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/235-S01/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/461-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-190/STAIR 1-6/S01-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-241/STAIR 1-6/S01-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 1/454-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/235-S01/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/346-S01/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/454-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/190-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/241-S01/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/241-S01/6-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S01 - Stairwell No. 1	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/462-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/190-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Stair 1/241-S01/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/241-S01/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/462-S01/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-249/STAIR 1-30/S01-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-249/Stair 1-30/S01-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 1/503-S01/54-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 1/Elev 1-S01/S01-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 1/Elev 1-S01/S01-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 1/Elev 1-S01/S01-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2128/STAIR 1-1/S01-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-S01-AUX BUILDING-STAIR 01-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S02 - Stairwell No. 2	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-S02	Stairwell No. 2	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S02 - Stairwell No. 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-S02 - Stairwell No. 2	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A17	Aux. Bldg-121'-Stairway No.2 Rad Side West	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1A-108-17	U1-S02 Detection System 1A-108-17 Room Stair 2	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-STAIR 2/502-S02/53-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-169/Stair 2-1/S02-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-Elev 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 2/Elev 2-S02/S02-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 2/Elev 2-S02/S02-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 2/Elev 2-S02/S02-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 2/Elev 2-S02/S02-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-215/STAIR 2-4/S02-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-Elev 2/184-S02/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/223-S02/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Fire Zone ID:** 1-S02 - Stairwell No. 2

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-Elev 2/334-S02/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/111-S02/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-S-STAIR 2/115-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/125-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/184-S02/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/223-S02/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/334-S02/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 2/STAIR 2-S02/S02-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 2/STAIR 2-S02/S02-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/110-S02/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/224-S02/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/318-S02/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/471-S02/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1 2510-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1 510-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2 2510-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2 510-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-Elev 2/209-S02/4-121 212	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/162-S02/4-100 Elev. No. 2 (2)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/209-S02/4-121 Elev. No. 2 (3)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/322-S02/4-139 Elev. No. 2 (4)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/409-S02/4-155 Elev. No. 2 (5)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/162-S02/4-100 159	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/215-S02/4-155 411	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/322-S02/4-139 316	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/115-S02/1-83 105	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/223-S02/1-121 214	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/334-S02/34-139 317	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 2/334-S02/34-139 317A	0:00, ,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U1-FNP-S-STAIR 2/429-S02/4-155 447	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 2/STAIR 2-S02/S02-83 Elev. No. 2 (1)	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 2/110-S02/1-83 104	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S02 - Stairwell No. 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-S02 - Stairwell No. 2	

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
ENCLOSURE1	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
ENCLOSURE2	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-S02-AUX BUILDING-STAIR 02-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-S02-AUX BUILDING-STAIR 02-Three Hour Rated Enclosure	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 1: Normal letdown is isolated using orifice isolation, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li> <li>Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"> <li>Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li> <li>Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li> </ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S02 - Stairwell No. 2	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, U-732257 Qualification of Three-Hour Rated Stairwell Enclosures
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation was to demonstrate the acceptability of three Promat H cement board enclosures constructed inside stairwells (two enclosures in Unit 1, Stairwell #2, and one enclosure in Unit 2, Stairwell #2) to provide separation and protection for various safety related circuits running through the stairs.</p> <p>Bases for Acceptability:</p> <p>The evaluation demonstrates that the three enclosures are functionally equivalent to three-hour fire resistance rated enclosures by comparing the FNP installations to Promat H assemblies that passed the three-hour fire resistance rating ASTM E-119 test.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S02 - Stairwell No. 2	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	1-S02 - Stairwell No. 2 Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-22), Unit 1 Auxiliary Building Stairwell No. 2 (Fire Area 1-S02), Automatic fire suppression (III.G.2.c criteria). lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Redundant safe shutdown cabling in Fire Area 1-S02 has been enclosed in a fire barrier</li> <li>• Early warning smoke detection system is provided.</li> <li>• The in-situ combustible fire loading is low and consists only of cable insulation with a maximum fire severity of less than one-hour.</li> <li>• All non-safe shutdown cables in this fire area are enclosed in conduit.</li> </ul> <p>The elimination of Kaowool fire barriers in this fire area is resolved by fire rated enclosures per DCP 03-1-9907 or fire area re-analysis/operator action.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805, Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-S02	Stairwell No. 2	—	E, R, D	E, R, S, B	Detection System, 1A-108-17: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. ERFBS, ENCLOSURE1: -- Risk: Required to meet Risk criteria. ERFBS, ENCLOSURE2: -- Risk: Required to meet Risk criteria. FireBarrier, U1-FNP-Ceiling-STAIR 2/502-S02/53-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-169/Stair 2-1/S02-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-Elev 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 2/Elev 2-S02/S02-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 2/Elev 2-S02/S02-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 2/Elev 2-S02/S02-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 2/Elev 2-S02/S02-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/209-S02/4-121:



## Fire Safety Analysis

**Fire Area ID:** 1-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/215-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/215-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-215/STAIR 2-4/S02-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/184-S02/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/223-S02/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/334-S02/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/115-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/125-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/184-S02/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/223-S02/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/334-S02/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 2/429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 2/STAIR 2-S02/S02-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 2/STAIR 2-S02/S02-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/110-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/224-S02/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 2/318-S02/40-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S02 - Stairwell No. 2	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-W-STAIR 2/471-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-S02-AUX BUILDING-STAIR 02-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Three Hour Rated Enclosure, U1-S02-AUX BUILDING-STAIR 02-Three Hour Rated Enclosure: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA.

Fire Safety Analysis

Fire Area ID:	1-S08 - Stairwell No. 8	Fire Area Definition
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-S08	Stairwell No. 8	

## Fire Safety Analysis

**Fire Area ID:** 1-S08 - Stairwell No. 8  
**Fire Zone ID:** 1-S08 - Stairwell No. 8

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-312/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-327/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U1-FNP-E-340/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/331-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/408-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/601-S08/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/601-S08/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/602-S08/93-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/602-S08/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-328/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-331/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/405-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-309/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/208-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/219-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 8/420-S08/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-328/Stair 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/160-S08/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/208-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/419-S08/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S08 - Stairwell No. 8	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-S08 - Stairwell No. 8	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-STAIR 8/420-S08/92-155: 1-155-131-01	0:00, N. of 420	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-312/Stair 8-4/S08-139 305	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/602-S08/93-121 332	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 8/405-S08/4-155 407	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/160-S08/4-100 154	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 8/208-S08/4-121 205	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-S08-AUX BUILDING-STAIR 08-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>



## Fire Safety Analysis

**Fire Area ID:** 1-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 1-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-S08	Stairwell No. 8	—	—	E, B	FireBarrier, U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-312/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-327/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-340/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/331-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/408-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/601-S08/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/601-S08/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/602-S08/93-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/602-S08/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-328/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-331/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 8/405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-309/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/208-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/219-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 8/420-S08/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-328/Stair 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/208-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 8/419-S08/4-155:

Fire Safety Analysis

Fire Area ID:	1-S08 - Stairwell No. 8	Required Systems and Features
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-S08-AUX BUILDING-STAIR 08-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S10 - Stairwell No. 10	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-S10	Stairwell No. 10	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S10 - Stairwell No. 10	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-S10 - Stairwell No. 10	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A31	Aux. Bldg-155'-Near Containment Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-STAIR 10/467-S10/4-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-609/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/329-S10/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/604-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/422-S10/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-606/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-608/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-610/Stair 10-4/S10-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 10/421-S10/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-STAIR 10/605-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-609/Stair 10-4/S10-131 335	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 10/604-S10/4-131 333	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/422-S10/4-155 431	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 10/608-S10/4-131 334	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-S10 - Stairwell No. 10	Systems and Features
Fire Zone ID:	1-S10 - Stairwell No. 10	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-S10-AUX BUILDING-STAIR 10-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-S10 - Stairwell No. 10  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using {Train A / Train B charging pump, swing charging pump via Train A/Train B power} aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-S10 - Stairwell No. 10  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-S10 - Stairwell No. 10  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S10 - Stairwell No. 10	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

**Licensing Action** Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

**Licensing Basis** Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-S10 - Stairwell No. 10	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-S10	Stairwell No. 10	—	—	E, B	FireBarrier, U1-FNP-Ceiling-STAIR 10/467-S10/4-165: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-609/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/329-S10/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 10/604-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 10/422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 10/608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-606/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-608/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-610/Stair 10-4/S10-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 10/421-S10/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-STAIR 10/605-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U1-S10-AUX BUILDING-STAIR 10-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-SVB1-A	Service Water Valve Box, 1-SVB1, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/NA-1-SVB1-A/1-SVB1-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/NA-1-SVB1-A/DU-DGVB-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-SVB1-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB1-A - Service Water Valve Box, 1-SVB1, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-SVB1-A	Service Water Valve Box, 1-SVB1, Train A	—	—	R, B	FireBarrier, U1-FNP-E-NA/NA-1-SVB1-A/1-SVB1-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/NA-1-SVB1-A/DU-DGVB-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-SVB1-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-SVB1-B	Service Water Valve Box, 1-SVB1, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/NA-1-SVB1-A/1-SVB1-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/NA-1-SVB1-B/DU-DGVB-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-SVB1-B-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB1-B - Service Water Valve Box, 1-SVB1, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-SVB1-B	Service Water Valve Box, 1-SVB1, Train B	—	—	R, B	FireBarrier, U1-FNP-E-NA/NA-1-SVB1-A/1-SVB1-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/NA-1-SVB1-B/DU-DGVB-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-SVB1-B-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-SVB2-A	Service Water Valve Box, 1-SVB2, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/NA-DU-DGVB-A/1-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/NA-DU-DGVB-B/1-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-SVB2-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB2-A - Service Water Valve Box, 1-SVB2, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-SVB2-A	Service Water Valve Box, 1-SVB2, Train A	—	—	R, B	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/NA-DU-DGVB-A/1-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/NA-DU-DGVB-B/1-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-SVB2-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-SVB2-B	Service Water Valve Box, 1-SVB2, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-SVB2-B-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB2-B - Service Water Valve Box, 1-SVB2, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-SVB2-B	Service Water Valve Box, 1-SVB2, Train B	—	—	R, B	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-SVB2-B-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-SVB3-A	Service Water Valve Box, 1-SVB3, Train A	



## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A  
**Fire Zone ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/NA-1-SVB3-B/1-SVB3-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/NA-1-SVB3-A/DU-DGVB-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-A - Service Water Valve Box, 1-SVB3, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-SVB3-A	Service Water Valve Box, 1-SVB3, Train A	—	—	—	FireBarrier, U1-FNP-E-NA/NA-1-SVB3-B/1-SVB3-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/NA-1-SVB3-A/DU-DGVB-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
1-SVB3-B	Service Water Valve Box, 1-SVB3, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/DGB-DU-DGVB-B/1-SVB3-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/NA-1-SVB3-B/1-SVB3-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB3-B - Service Water Valve Box, 1-SVB3, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-SVB3-B	Service Water Valve Box, 1-SVB3, Train B	—	—	—	FireBarrier, U1-FNP-E-NA/DGB-DU-DGVB-B/1-SVB3-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/NA-1-SVB3-B/1-SVB3-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-SVB4-A	Service Water Valve Box, 1-SVB4, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/NA-1-SVB4-A/1-SVB4-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/NA-DU-DGVB-A/1-SVB4-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-SVB4-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.</li> <li>Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB4-A - Service Water Valve Box, 1-SVB4, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-SVB4-A	Service Water Valve Box, 1-SVB4, Train A	—	—	R, B	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/NA-1-SVB4-A/1-SVB4-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/NA-DU-DGVB-A/1-SVB4-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-SVB4-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
1-SVB4-B	Service Water Valve Box, 1-SVB4, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/NA-1-SVB4-A/1-SVB4-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/NA-1-SVB4-B/DU-DGVB-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-SVB4-B-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power. Unit 2: Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 1: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 2: RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries – Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries – Service Water	<ul style="list-style-type: none"> <li>Unit 1: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 2: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries – Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 1: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 2: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries – HVAC	<ul style="list-style-type: none"><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-SVB4-B - Service Water Valve Box, 1-SVB4, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
1-SVB4-B	Service Water Valve Box, 1-SVB4, Train B	—	—	R, B	FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/NA-1-SVB4-A/1-SVB4-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/NA-1-SVB4-B/DU-DGVB-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-SVB4-B-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
1-084-U1	Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs	
1-085-U1	Turbine Building, General Area	
1-087-U1	Steam Generator Feed Pumps A & B	
1-088-U1	Turbine Building Switchgear Area	
1-STAIRWELL-S	SOUTH STAIRWELL IN UNIT 1 TURBINE BUILDING	
1-STAIRWELL-W	WEST STAIRWELL IN UNIT 1 TURBINE BUILDING	

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-084-U1 - Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1T-12B-1	Preaction Sprinkler System, U1-84, SGFP Tubine 1B Oil Conditioner, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-12B-2	Preaction Sprinkler System, U1-85, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-2-1	Wet Pipe Sprinkler System, U1-84, Turbine Building Elevation 155' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-3-1	Preaction Sprinkler System, U1-84, Main Turbine Oil Conditioner, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-9-2	Preaction Sprinkler System, U1-84, Turbine Oil Reservoir, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-084-U1 - Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155 T105	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U1 - Turbine Building, General Area

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T1	Turb. Bldg.-137'-Water Analysis Room Outside	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T1-1	Turb. Bldg.-137'-Water Analysis Room Outside	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T10	Turb. Bldg.-155'-SGFP 1A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T11	Turb. Bldg.-155'-L.P. Heater 1A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T12	Turb. Bldg.-155'-S.E. Stairs	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T13	Turb. Bldg.-155'-L.P. Heater 1B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T14	Turb. Bldg.-155'-Air Ejectors	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T15	Turb. Bldg.-173'-L.P. FW Heater 5B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T16	Turb. Bldg.-173'-L.P. FW Heater 5A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T17	Turb. Bldg.-189'-L.P. Heater 4A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T18	Turb. Bldg.-189'-L.P. Heater 4B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T2	Turb. Bldg.-137'-E. of Condenser B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T3	Turb. Bldg.-137'-E. of Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T4	Turb. Bldg.-137'-South Stairway	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T5	Turb. Bldg.-137'-S.W. of Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T6	Turb. Bldg.-137'-N.W. of Condenser B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T7	Turb. Bldg.-137'-Air Filter Unit	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T8	Turb. Bldg.-137'-N.E. Stairs	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T9	Turb. Bldg.-155'-N.E. Stairs	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
Foam Cart	High level system descriptor is superseded by zone-level descriptor. See zone-level descriptor.	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D001	Hose Station - N1U43D001-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D001A	Hose Station - N1U43D001A-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D003	Hose Station - N1U43D003-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D004	Hose Station - N1U43D004-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D005	Hose Station - N1U43D005-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D006	Hose Station - N1U43D006-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D007	Hose Station - N1U43D007-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D008	Hose Station - N1U43D008-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D009	Hose Station - N1U43D009-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D010	Hose Station - N1U43D010-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D011	Hose Station - N1U43D011-FZ 085 Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-085-U1 - Turbine Building, General Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1U43D012	Hose Station - N1U43D012-FZ 85B Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D013	Hose Station - N1U43D013-FZ 85B Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D014	Hose Station - N1U43D014-FZ 85B Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D015	Hose Station - N1U43D015-FZ 85B Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D016	Hose Station - N1U43D016-FZ 85I Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D017	Hose Station - N1U43D017-FZ 85I Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D018	Hose Station - N1U43D018-FZ 85I Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D019	Hose Station - N1U43D019-FZ 85I Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D020	Hose Station - N1U43D020-FZ 85I Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N1U43D021	Hose Station - N1U43D021-FZ 85I Room U1 Turb	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-16A-1	U1-85 Detection System 1T-16A-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1T-16B-1	U1-85 Detection System 1T-16B-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1T-16C-1	U1-85 Detection System 1T-16C-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1T-16D-1	U1-85 Detection System 1T-16D-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
1T-16E-1	U1-85 Detection System 1T-16E-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U1 - Turbine Building, General Area

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1U43T001B	Turbine Building 13 Ton CO2 Storage Tank located in 1-085 at 137'	-	Yes		Yes	Yes
WS-1T-10-1	Wet Pipe Sprinkler System, U1-85, Turbine Building Elevations 173' and 189' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-16C-1	Manual Fixed Water Spray System, U1-85, Turbine & Generator Bearings #4 & #5, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-16D-1	Manual Fixed Water Spray System, U1-85, Turbine & Generator Bearings #6 & #7, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-16E-1	Manual Fixed Water Spray System, U1-85, Turbine & Generator Bearing #8, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-18-1	Wet Pipe Sprinkler System, U1-85, Turbine Building Elevation 189' Westinghouse Office, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-2-2	Wet Pipe Sprinkler System, U1-85, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-82/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-83/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85B/85I-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85C/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U1 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-82/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-83/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85A/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/85G-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85E/85F-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85F/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U1 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-83/85C-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85B/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85C/85E-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U2 TURB-85I/85I-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U1 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85B/86-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85F/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/80K-85B/159-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-81/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-85B/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-86/85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137 T011	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155 T111	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155 T112	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		1-TB-U1 - Turbine Building General Area 1-085-U1 - Turbine Building, General Area			Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T006	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T008	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T012	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137 T007	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137 T010	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155 T113	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155 PA101	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-82/85A-137 T009	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-83/85A-137 T003	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85F/85D-137 T004	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137 T001	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85B-155 T103	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85G-155 T102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155 T104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189 T303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173 T201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155 T115	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 247-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 289-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 247-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 289-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85F/85A-137 T005	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137 T002	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173 T200	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-TB-U1 - Turbine Building General Area	Systems and Features
Fire Zone ID:	1-085-U1 - Turbine Building, General Area	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-087-U1 - Steam Generator Feed Pumps A & B	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-17-1	U1-87 Detection System 1T-17-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
1T-20-1	U1-87 Detection System 1T-20-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1T-17-1	Manual Fixed Water Spray System, U1-87, Steam Generator Feed Pump 1A, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-20-1	Manual Fixed Water Spray System, U1-87, Steam Generator Feed Pump 1B, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-TB-U1 - Turbine Building General Area	Systems and Features
Fire Zone ID:	1-087-U1 - Steam Generator Feed Pumps A & B	

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-088-U1 - Turbine Building Switchgear Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-13-1	U1-88 Detection System 1T-13-1 Room U1 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1T-13-1	Local CO2 system in Fire Area 88A , room number U1 TURB, 600V Load Center 1P	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-13-2	Local CO2 system in Fire Area 88D , room number U1 TURB, 600V Load Center 1Q	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-13-3	Local CO2 system in Fire Area 88F , room number U1 TURB, 600V Load Center 1G	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-14-1	Local CO2 system in Fire Area 88C , room number U1 TURB, 4160V Bus 1E	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-14-2	Local CO2 system in Fire Area 88B , room number U1 TURB, 4160V Bus 1D	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-14-3	Local CO2 system in Fire Area 88E , room number U1 TURB, P.T. Cabinets	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-088-U1 - Turbine Building Switchgear Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-STAIRWELL-S - SOUTH STAIRWELL IN UNIT 1 TURBINE BUILDING

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Fire Zone ID:** 1-STAIRWELL-S - SOUTH STAIRWELL IN UNIT 1 TURBINE BUILDING

### Systems and Features

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155 T104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189 T303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155 T105	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137 T002	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173 T200	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-STAIRWELL-W - WEST STAIRWELL IN UNIT 1 TURBINE BUILDING	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173 T201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump aligned to Train A / Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal charging using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the performance-based approach Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 1A/1B/1C. Performance-based approach main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable &amp; combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
1-084-U1	Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs	D	—	—	FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-085-U1	Turbine Building, General Area	D	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1T-12B-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-12B-2: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-2-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-3-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-9-2: -- DID: Required to meet DID criteria. Detection System, 1T-16A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1T-16B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1T-16C-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1T-16D-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 1T-16E-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-82/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-83/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85B/85I-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85C/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-82/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-83/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85A/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/85G-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85E/85F-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85F/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-81/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-83/85C-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85B/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85C/85E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-86/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-86/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85B-173:

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U2 TURB-85I/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-85B/86-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-85F/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-W-U1 TURB/80K-85B/159-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-81/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-85B/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-86/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1T-10-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-16C-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-16D-1:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-087-U1	Steam Generator Feed Pumps A & B	D	E, R, N	—	-- DID: Required to meet DID criteria. Water Suppression, WS-1T-16E-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-18-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-2-2: -- DID: Required to meet DID criteria. Detection System, 1T-17-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 1T-20-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1T-17-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-20-1: -- DID: Required to meet DID criteria.



## Fire Safety Analysis

**Fire Area ID:** 1-TB-U1 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-088-U1	Turbine Building Switchgear Area	R, D	E, R, S, N	—	<p>Detection System, 1T-13-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1T-13-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-13-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-13-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-14-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-14-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-14-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.
1-STAIRWELL-S	SOUTH STAIRWELL IN UNIT 1 TURBINE BUILDING	—	—	—	FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/86-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U1 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-STAIRWELL-W	WEST STAIRWELL IN UNIT 1 TURBINE BUILDING	—	—	—	FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
1-084-U2	Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs	
1-085-U2	Turbine Building, General Area	
1-087-U2	Steam Generator Feed Pumps A & B	
1-088-U2	Turbine Building Switchgear Area	

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-084-U2 - Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1T-12B-1	Preaction Sprinkler System, U1-84, SGFP Tubine 1B Oil Conditioner, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-12B-2	Preaction Sprinkler System, U1-85, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-2-1	Wet Pipe Sprinkler System, U1-84, Turbine Building Elevation 155' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-3-1	Preaction Sprinkler System, U1-84, Main Turbine Oil Conditioner, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-9-2	Preaction Sprinkler System, U1-84, Turbine Oil Reservoir, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-084-U2 - Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155 T105	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U2 - Turbine Building, General Area

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T1	Turb. Bldg.-137'-Water Analysis Room Outside	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T1-1	Turb. Bldg.-137'-Water Analysis Room Outside	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T10	Turb. Bldg.-155'-SGFP 1A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T11	Turb. Bldg.-155'-L.P. Heater 1A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T12	Turb. Bldg.-155'-S.E. Stairs	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T13	Turb. Bldg.-155'-L.P. Heater 1B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T14	Turb. Bldg.-155'-Air Ejectors	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T15	Turb. Bldg.-173'-L.P. FW Heater 5B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T16	Turb. Bldg.-173'-L.P. FW Heater 5A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T17	Turb. Bldg.-189'-L.P. Heater 4A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T18	Turb. Bldg.-189'-L.P. Heater 4B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T2	Turb. Bldg.-137'-E. of Condenser B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T3	Turb. Bldg.-137'-E. of Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T4	Turb. Bldg.-137'-South Stairway	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T5	Turb. Bldg.-137'-S.W. of Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T6	Turb. Bldg.-137'-N.W. of Condenser B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T7	Turb. Bldg.-137'-Air Filter Unit	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T8	Turb. Bldg.-137'-N.E. Stairs	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T9	Turb. Bldg.-155'-N.E. Stairs	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-16A-1	U1-85 Detection System 1T-16A-1 Room U1 Turb	-	Yes		Yes	-
1T-16B-1	U1-85 Detection System 1T-16B-1 Room U1 Turb	-	Yes		Yes	-
1T-16C-1	U1-85 Detection System 1T-16C-1 Room U1 Turb	-	Yes		Yes	-
1T-16D-1	U1-85 Detection System 1T-16D-1 Room U1 Turb	-	Yes		Yes	-
1T-16E-1	U1-85 Detection System 1T-16E-1 Room U1 Turb	-	Yes		Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U2 - Turbine Building, General Area

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1U43T001B	Turbine Building 13 Ton CO2 Storage Tank located in 1-085 at 137'	-	Yes		Yes	Yes
WS-1T-10-1	Wet Pipe Sprinkler System, U1-85, Turbine Building Elevations 173' and 189' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-16C-1	Manual Fixed Water Spray System, U1-85, Turbine & Generator Bearings #4 & #5, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-16D-1	Manual Fixed Water Spray System, U1-85, Turbine & Generator Bearings #6 & #7, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-16E-1	Manual Fixed Water Spray System, U1-85, Turbine & Generator Bearing #8, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-18-1	Wet Pipe Sprinkler System, U1-85, Turbine Building Elevation 189' Westinghouse Office, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-2-2	Wet Pipe Sprinkler System, U1-85, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-82/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-83/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/86-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85B/85I-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85C/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U2 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-82/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-83/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85A/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85B/85G-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85E/85F-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85F/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U2 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-83/85C-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85B/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-85C/85E-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U2 TURB-85I/85I-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-085-U2 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85B/86-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85F/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/80K-85B/159-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-81/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-85B/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-86/85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85I-189	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137 T011	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155 T111	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155 T112	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		1-TB-U2 - Turbine Building General Area 1-085-U2 - Turbine Building, General Area			Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T006	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T008	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T012	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137 T007	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137 T010	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155 T113	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155 PA101	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-82/85A-137 T009	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-83/85A-137 T003	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-85F/85D-137 T004	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-81/85D-137 T001	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85B-155 T103	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-86/85G-155 T102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155 T104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189 T303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173 T201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155 T115	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 247-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 289-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 247-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 289-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-85F/85A-137 T005	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137 T002	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173 T200	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	1-TB-U2 - Turbine Building General Area	Systems and Features
Fire Zone ID:	1-085-U2 - Turbine Building, General Area	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	1-087-U2 - Steam Generator Feed Pumps A & B	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-17-1	U1-87 Detection System 1T-17-1 Room U1 Turb	-	Yes		Yes	-
1T-20-1	U1-87 Detection System 1T-20-1 Room U1 Turb	-	Yes		Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1T-17-1	Manual Fixed Water Spray System, U1-87, Steam Generator Feed Pump 1A, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-1T-20-1	Manual Fixed Water Spray System, U1-87, Steam Generator Feed Pump 1B, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	1-TB-U2 - Turbine Building General Area	Systems and Features
Fire Zone ID:	1-087-U2 - Steam Generator Feed Pumps A & B	

Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-088-U2 - Turbine Building Switchgear Area

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1T-13-1	U1-88 Detection System 1T-13-1 Room U1 Turb	-	Yes		Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-1T-13-1	Local CO2 system in Fire Area 88A , room number U1 TURB, 600V Load Center 1P	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-13-2	Local CO2 system in Fire Area 88D , room number U1 TURB, 600V Load Center 1Q	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-13-3	Local CO2 system in Fire Area 88F , room number U1 TURB, 600V Load Center 1G	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-14-1	Local CO2 system in Fire Area 88C , room number U1 TURB, 4160V Bus 1E	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-14-2	Local CO2 system in Fire Area 88B , room number U1 TURB, 4160V Bus 1D	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-1T-14-3	Local CO2 system in Fire Area 88E , room number U1 TURB, P.T. Cabinets	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Fire Zone ID:** 1-088-U2 - Turbine Building Switchgear Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by preventing boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump, or swing charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable &amp; combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-084-U2	Turbine, SGFP, and Hw Seal Oil Conditioners & Reservoirs	D	—	—	<p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-085-U2	Turbine Building, General Area	D	—	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/84B-155: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1T-12B-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-12B-2: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-2-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-3-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-9-2: -- DID: Required to meet DID criteria. FireBarrier, U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-82/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-83/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84A/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/84B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85A/86-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85B/85I-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85C/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155:



## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-82/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-83/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85A/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/84B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85B/85G-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85C/85A-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85E/85F-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-85F/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-81/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-83/85C-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84A/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85B/84B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85B/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-85C/85E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-86/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-86/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155:

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-STAIRWELL-S/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-Stairwell-W/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U2 TURB-85I/85I-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 1-TB-U2 - Turbine Building General Area  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-85B/86-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-85F/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/80K-85B/159-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-81/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-85B/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-86/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85B-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-Stairwell-S/85I-189: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1T-10-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-16C-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-16D-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-16E-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-18-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-2-2: -- DID: Required to meet DID criteria.
1-087-U2	Steam Generator Feed Pumps A & B	D	—	—	FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84E/87B-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/87B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-088-U2	Turbine Building Switchgear Area	R, D	—	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-87B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-1T-17-1: -- DID: Required to meet DID criteria. Water Suppression, WS-1T-20-1: -- DID: Required to meet DID criteria. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-84C/88E-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88C-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88D-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85D/88F-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85E/88B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-U1 TURB/U1 TURB-85F/88C-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88A/87B-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	1-TB-U2 - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/U1 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-1T-13-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-13-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-13-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-14-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-14-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-1T-14-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2101	2101 Waste Gas Decay Tank Room	
2102	2102 Valve Compartment Room	
2103	2103 Corridor	
2104	2104 Passageway to Unit 1	
2105	2105 Catalytic H2 Recombiner 1A Room	
2106	2106 Catalytic H2 Recombiner 1B Room	
2108	2108 Waste Monitor Tank Room	
2109	2109 Waste Monitor Tank Pump Room	
2110	2110 Monitor Control Panel Room	
2111	2111 Containment Spray Pump Room 1A	
2112	2112 Access to Tendon Access Gallery	
2113	2113 Valve Encapsulation	
2114	2114 Pipe Chase	
2115	2115 Hallway	
2118	2118 Floor Drain Tank Room	
2119	2119 Waste Holdup Tank Room	
2120	2120 Corridor	
2121	2121 Floor Drain Tank Pump Room	
2122	2122 Waste Evaporator Feed Pump Room	
2123	2123 Pipe Chase	
2124	2124 Valve Encapsulation	
2125	2125 Containment Spray Pump Room 1B	
2126	2126 Pipe Chase	
2127	2127 Pipe Chase	
2128	2128 RHR Heat Exchanger Room	
2129	2129 RHR Low Head Pump Room	
2130	2130 Pipe Chase	
2131	2131 RHR Low Head Pump Room	
2169	2169 Duct and Pipe Chase	
2183	2183 Tendon Access Gallery Entrance	
2184	2184 Piping Penetration Room, El. 100'-0"	
2196	2196 Access to Tendon Access Gallery	
2223	2223 Piping Penetration Room, El. 121'-0"	



## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Fire Zone ID:** 2101 - 2101 Waste Gas Decay Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-1	U2-1 Detection System 2A-100-1 Room 2101	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-100-2	U2-1 Detection System 2A-100-2 Room 2102	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-101/2101-U1-1/U2-1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-102/2102-U1-1/U2-1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2101/2151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2102/2151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2102/2104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2101/2103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2102/2103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2101/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-001 - Aux Building  
Fire Zone ID: 2102 - 2102 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2103 - 2103 Corridor	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D103	Hose Station - N2V43D103-FZ 1 Room 2103	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-3	U2-1 Detection System 2A-100-3 Room 2103	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-100-5	U2-1 Detection System 2A-100-5 Room 2105	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-100-6	U2-1 Detection System 2A-100-6 Room 2106	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2105/2152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2105/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2106/2164-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2103/2104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2107/2106-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2101/2103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2102/2103-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2105/2109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2106/2108-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2106/2109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2107/2103-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2103/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2104/2105-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2107/2106-90/1-83: 2-083-111-02	0:00, W. of 2106	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2107/2103-90/1-83: 2-083-111-03	0:00, N. of 2103	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2107/2103-90/1-83: 2-083-111-04	0:00, S. of 2107	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2103 - 2103 Corridor	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2107/2103-90/1-83 2102	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2104 - 2104 Passageway to Unit 1	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D102	Hose Station - N2V43D102-FZ 1 Room 2110	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-10	U2-1 Detection System 2A-100-10 Room 2110	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-100-4	U2-1 Detection System 2A-100-4 Room 2104	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-100-9	U2-1 Detection System 2A-100-9 Room 2109	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-104/2104-U1-1/U2-1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2104/2152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2104/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2109/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2110/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2110/2169-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2110/2169-1/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2102/2104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2103/2104-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2108/2109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2110/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2105/2109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2106/2109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2109/2118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2109/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2110/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2110-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2104/2105-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2110-S02/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2104 - 2104 Passageway to Unit 1	

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-104/2104-U1-1/U2-1-83 101	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2110-S02/1-83 2104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-2104-Plant staff Training	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-1-AUX BUILDING-2104-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2105 - 2105 Catalytic H2 Recombiner 1A Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A80	Aux.Bldg.-83'-Recombiner Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2106 - 2106 Catalytic H2 Recombiner 1B Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A81	Aux.Bldg.-83'-Recombiner Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2108 - 2108 Waste Monitor Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-8	U2-1 Detection System 2A-100-8 Room 2108	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2108/2166-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2108/2167-1/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2108/2109-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2106/2108-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2107/2108-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2108/2118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2108/2119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2108/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2107/2108-90/1-83: 2-083-111-01	0:00, S. of 2108	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2109 - 2109 Waste Monitor Tank Pump Room	

Extinguishers

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Hose Stations

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Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

—

Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2110 - 2110 Monitor Control Panel Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A83	Aux.Bldg.-83'-Near Recombiner Cont. Pnl.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2111 - 2111 Containment Spray Pump Room 1A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A86	Aux.Bldg.-77'-2A Spray Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-11	U2-1 Detection System 2A-100-11 Room 2111	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2111/2162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2111/2170-1/5-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2111/2171-1/5-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2111/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2111/2184-1/1-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2111/2115-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-Elev 2/2111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2111/2113-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2111/2114-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2111/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 2/2111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-STAIR 1/2111-S02/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2112/2111-1/1-88	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2111/2113-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2111/2115-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2111/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2112/2111-1/1-88	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2111 - 2111 Containment Spray Pump Room 1A	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2111/2115-1/1-83 2106	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Fire Zone ID:** 2112 - 2112 Access to Tendon Access Gallery

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2112/2183-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2112/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2112/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2112/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2112/2111-1/1-88	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2112/2111-1/1-88	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2113 - 2113 Valve Encapsulation	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-21	U2-1 Detection System 2A-100-21 Room 2113	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2113/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2111/2113-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2113/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2113/2225-20/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2111/2113-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2113/2114-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2114 - 2114 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2114/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2111/2114-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2114/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2113/2114-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2114/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2115 - 2115 Hallway	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-23	U2-1 Detection System 2A-100-23 Room 2115	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2115/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2111/2115-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2115/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2115-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2111/2115-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2115/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-STAIR 2/2115-S02/1-83 2105	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2111/2115-1/1-83 2106	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-2115-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2118 - 2118 Floor Drain Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-12	U2-1 Detection System 2A-100-12 Room 2118	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2118/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2118/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2108/2118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2109/2118-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2118/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2118/2119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2119 - 2119 Waste Holdup Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-13	U2-1 Detection System 2A-100-13 Room 2119	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2119/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2108/2119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2119/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2118/2119-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2119/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2120 - 2120 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A84	Aux.Bldg.-83'-RHR Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-14	U2-1 Detection System 2A-100-14 Room 2120	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2120/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2118/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2120/2121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2120/2122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2109/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2110/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2120/2131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2121/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2120-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2120/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2129/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2120/2131-1/1-83 2112	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2129/2120-1/1-83 2111	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

Fire Area ID: 2-001 - Aux Building  
Fire Zone ID: 2120 - 2120 Corridor

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2121 - 2121 Floor Drain Tank Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-15	U2-1 Detection System 2A-100-15 Room 2121	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2121/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2120/2121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2121/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2122/2121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2121-9/8-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2123/2121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2122 - 2122 Waste Evaporator Feed Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-16	U2-1 Detection System 2A-100-16 Room 2122	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2122/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2120/2122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2122/2121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2129/2122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2123/2122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2123 - 2123 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2123/2246-1/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2117/2123-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2117/2123-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2123/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2127/2123-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2123/2121-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2123/2122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2123/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2123/2185-6/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2124/2123-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2126/2123-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

Fire Area ID: 2-001 - Aux Building  
Fire Zone ID: 2124 - 2124 Valve Encapsulation

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2124/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2124-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2124/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2124/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2124/2123-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2126/2124-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Fire Zone ID:** 2125 - 2125 Containment Spray Pump Room 1B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-22	U2-1 Detection System 2A-100-22 Room 2125	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2125/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2110/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2125-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2124/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2126/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2113/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2114/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2115/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2125/2127-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2125/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2125-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2124/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2111/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2114/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2115/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2125 - 2125 Containment Spray Pump Room 1B	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2126 - 2126 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2126/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2126/2125-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2126/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2126/2123-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2126/2124-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2127 - 2127 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2127/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2127/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2127/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2125/2127-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2127/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2127/2123-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2127/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2128 - 2128 RHR Heat Exchanger Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A85	Aux.Bldg.-83'-RHR Hx Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-17	U2-1 Detection System 2A-100-17 Room 2128	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2128/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2128/STAIR 1-1/S01-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2118/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2119/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2120/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2131/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2129 - 2129 RHR Low Head Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-18	U2-1 Detection System 2A-100-18 Room 2129	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2129/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2129/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2127/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2129/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2126/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2127/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2129/2122-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2130/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2131/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2127/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2129/2120-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2129/2120-1/1-83 2111	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2129 - 2129 RHR Low Head Pump Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2130 - 2130 Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2130/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2130/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2130/2131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2130/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2130/2131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2131 - 2131 RHR Low Head Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-19	U2-1 Detection System 2A-100-19 Room 2131	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2131/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2131/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2131/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2120/2131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2130/2131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2131/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2131/2129-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2130/2131-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2131/2128-1/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2120/2131-1/1-83 2112	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2169 - 2169 Duct and Pipe Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2110/2169-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2110/2169-1/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2169/2224-1/18-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2169/2184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2169/2116-1/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2169/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2169/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2169-S02/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2169/2168-1/4-100: 2-100-113-03	0:00, E. of 2168	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Fire Zone ID:** 2183 - 2183 Tendon Access Gallery Entrance

**Systems and Features**

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D124	Hose Station - N2V43D124-FZ 1 Room 2184	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-20	U2-1 Detection System 2A-100-20 Room 2183	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-101-13	U2-1 Detection System 2A-101-13 Room 2183	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-7	U2-1 Detection System 2A-102-7 Room 2184	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2111/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2111/2184-1/1-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2112/2183-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2112/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2113/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2114/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2115/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2124/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2125/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2126/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2127/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2129/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2131/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2183/2216-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2183/2223-1/1-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2184/2223-1/1-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2184-8/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2184-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2169/2184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2123/2184-1/1-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2162/2184-4/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2183 - 2183 Tendon Access Gallery Entrance	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2183/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2184/2189-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2184/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2183/2171-1/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2184/STAIR 2-1/S02-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2171/2183-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2182/2183-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2184/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-2183-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-001 - Aux Building	Systems and Features
Fire Zone ID:	2184 - 2184 Piping Penetration Room, El. 100'-0"	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Fire Zone ID:** 2196 - 2196 Access to Tendon Access Gallery

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Fire Zone ID:** 2223 - 2223 Piping Penetration Room, El. 121'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D127	Hose Station - N2V43D127-FZ 1 Room 2223	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-45-1	U2-1 Detection System 2A-45-1 Room 2223	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-45-2	Preaction Sprinkler, U2-1, Piping Penetration Room, Room 2223	-	Yes	-- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2172/2223-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2181/2223-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2182/2223-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2183/2223-1/1-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2184/2223-1/1-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2333-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2334-1/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2347-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2223-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2235/2223-23/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2223-6/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2246/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2217/2223-4/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2217/2223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2218/2223-4/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2223/CTMT-1/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2223-S02/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2223/2233-1/21-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2223 - 2223 Piping Penetration Room, El. 121'-0"	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2172/2223-5/1-100: 2-121-117-01	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2172/2223-5/1-100: 2-121-117-02	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2181/2223-5/1-100: 2-121-117-03	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2181/2223-5/1-100: 2-121-117-04	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2223/2333-1/35-139: 2-139-120-03	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2334-1/34-139: 2-139-119-10	0:00, F. of 2334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2334-1/34-139: 2-139-119-12	0:00, F. of 2334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2334-1/34-139: 2-139-120-01	0:00, F. of 2324	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2347-1/35-139: 2-139-120-04	0:00, F. of 2347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2347-1/35-139: 2-139-120-05	0:00, F. of 2347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-STAIR 2/2223-S02/1-121 2214	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>• Unit 2: Subcritical conditions are maintained by performance-based approach isolating the VCT to prevent boron dilution and by performance-based approach charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>• Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>• Unit 2: RCS inventory is controlled using Train B charging pump or swing charging pump aligned to the RWST.</li> <li>• Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>• Unit 2: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve.</li> <li>• Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>• Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.</li> <li>• Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW or Train B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"><li>• Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B. 2. Performance-based approach 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li><li>• Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li></ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, DOEJ-SM-03-0415-001    Applicability of NFPA 80 Door Closer Requirements	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation addresses a select number of fire doors that occasionally may not automatically latch closed due to "abnormal air pressure".</p> <p>Bases for Acceptability:</p> <p>The specific fire doors cited are PA101, 201 and 497. The evaluation justifies the door latching deviation by taking credit for plant staff that ensure all fire doors are closed after entry or egress.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001    Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A    Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	<p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	<p>6-1 of the report</p> <ul style="list-style-type: none"> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluations**

- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-36), Unit 2 Auxiliary Building Elevations 83 ft., 100 ft., 121 ft. (fire area 2-001) Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression and detection, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of the instrument air system, one of the three main steam atmospheric relief valves, charging pump miniflow and the pressurizer PORVs and block valves.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>For lack of area wide smoke detection:</p> <ul style="list-style-type: none"><li>• The rooms in fire area 2-001 without detection (2112, 2114, 2115, 2123, 2126, 2127, 2130, 2169, and 2196) contain little or no combustible material and contain no safe shutdown cable or equipment.</li><li>• One train of redundant cables is provided with fire barriers consisting of two 1-inch layers of Kaowool blanket with overall layer of Zetex cloth.</li></ul> <p>For Initiation of Safety Signals:</p> <ul style="list-style-type: none"><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9930 and fire area re-analysis.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-37), Unit 2 Auxiliary Building, Elevations 100, 121, 130, 139, 155, and 184 ft. (Fire Area 2-004) ), Enclosure of one train with a 1 hour rated fire barrier with automatic fire suppression and detection (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression and lack of separation of redundant trains by 3 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>For power distribution system:</p> <ul style="list-style-type: none"> <li>• The redundant MCCs 2A and 2B are separated by a 2-ft-thick reinforced concrete floor at el 139 ft - 0 in.</li> <li>• Unsealed penetrations have been reviewed and will not affect separation.</li> <li>• Minimum horizontal separation between components is approximately 66 feet with complete automatic suppression coverage at el 121 ft - 0 in.</li> <li>• The redundant dc distribution panels 2C and 2F are separated by a 2-ft-thick reinforced concrete floor at el 139 ft.</li> <li>• The minimum horizontal separation between these redundant panels is approximately 55 ft and has complete automatic suppression coverage at el 121 ft - 0 in.</li> <li>• A smoke detection system is installed in all rooms containing the subject equipment.</li> <li>• Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on the subject elevations.</li> <li>• Manual actions can be performed to establish control of the atmospheric relief valves by closing the manual air vent valve to bleed off air from the diaphragm of the valve actuator, and thus control steam generator pressure and reactor coolant system temperature with the use of the manually controlled atmospheric relief valves.</li> </ul> <p>For Instrumentation - condensate water storage tank level indication</p> <ul style="list-style-type: none"> <li>• Redundant cables are separated by two, 2-ft-thick reinforced concrete floors at el 139 ft - 0 in. and 155 ft - 0 in. Unsealed penetrations have been reviewed and will not affect the separation.</li> <li>• The Train-B cabling at el 121 ft - 0 in. is provided with automatic fixed suppression over 95 percent of its route.</li> <li>• A smoke detection system is installed in all rooms containing the subject cabling.</li> <li>• Manual hose stations, portable carbon dioxide extinguishers, and portable smoke removal equipment are available for use on the subject elevations.</li> </ul> <p>For instrument air - PORVs:</p> <ul style="list-style-type: none"> <li>• Redundant cables are separated by a 2-ft-thick reinforced concrete floor at el 121 ft - 0 in. and 139 ft - 0 in.</li> <li>• Unsealed penetrations in the subject floors have been reviewed</li> <li>• Train A cables have full suppression coverage on el 100 ft - 0 in.</li> <li>• Train B cables have full suppression coverage on el 121 ft - 0 in.</li> <li>• Smoke detection system is installed in all rooms containing the subject cabling.</li> <li>• Manual hose stations and portable carbon dioxide extinguishers are available for use on the subject elevations.</li> </ul> <p>For Auxiliary Feedwater:</p> <ul style="list-style-type: none"> <li>• The 2-h provided by battery power to the turbine driven auxiliary feedwater UPS is adequate for existing procedures for manual operation to be implemented.</li> </ul> <p>For HVAC - battery room ventilation:</p> <ul style="list-style-type: none"> <li>• The requirement for battery and battery charger room ventilation is a long term requirement.</li> <li>• Either portable ventilation equipment will be installed in the effected room(s) or</li> <li>• The damaged ventilation system will be repaired within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not exceed acceptable limits.</li> </ul> <p>For steam release (cooldown):</p>

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Previously Approved Engineering Evaluations**

- Manual action can be performed to establish manual control of the atmospheric relief valves by closing the manual air vent valve to bleed off air from the diaphragm of the valve actuator.

For Service Water:

- A long term manual action (greater than 24 h) can be performed to shift the service water discharge from the river and recirc. to the service water pond.

For neutron flux monitoring:

- Configuration of redundant equipment cables and equipment with respect to barriers would limit the fire to one train of equipment.
- Unsealed penetrations in the subject floor slab have been reviewed and will not affect the separation afforded by the concrete floor.

For boration/makeup, depressurization, and RCP seal integrity:

- Modification to provide a fire-rated barrier for Train-A raceways ADD1C-, ADD18A, and ADD21A.
- Full suppression coverage is provided in rooms 2163, 2162, 2161, 2160, and 2175
- Cables are separated by 2-ft-thick reinforced concrete except in room 2155 where there is 24 ft of separation with no intervening combustibles.
- Unsealed penetrations in the subject walls have been reviewed.
- A smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations, portable CO, extinguishers, and portable smoke removal equipment are available for use on this elevation.
- Heat collectors have been installed on all sidewall sprinkler heads in room 2161.
- Modification is to provide a fire-rated barrier for the Train-B charging pump room cooler power cable (Raceways BFD02B, BFD03B, and BFD06B) where this cable is in close proximity to redundant Train-A cables.
- Automatic fire suppression system is provided.
- The blackout near Col. 20 which communicates between elevation 100 ft and 121 ft. will be sealed.
- EI 100 ft. and 121 ft - Automatic suppression and detection systems provided for the subject Train-B cables.
- Cables are separated by a 2-ft-thick reinforced concrete slab floor at el 121 ft - 0 in.
- Unsealed penetrations in the floor slab have been reviewed
- Raceways BFD2GD, BFD21B, BHF457, and BHF42 have been provided with a fire barrier in room 2186, to ensure that a source of borted makeup water is available from the RWST and will not require any manual operator action.
- The cabling for LCV115D has been protected by the fire barrier installed in the modification above and will not fail in the closed position.

For Smoke Detection:

- Smoke detection has been added to Room 2342 (spent fuel pool pump room).
- All cabling in this pipe chase (room 2341) is enclosed in conduit.
- The pipe chase has no in situ combustible.
- The pipe chase exits the auxiliary building below grade.
- This transition from room 2608 to room 2341 has a concrete wall with water tight penetrations.
- There is no redundant safe-shutdown cabling in room 2341.
- Low in situ combustible loading and the very low probability of a transient combustible being introduced.

For reactor coolant boundary integrity:

- Manual action can be performed to remove power from all cables in the shared raceway. This can be accomplished by opening the supply breaker on 125 V-dc switchgear 2A for 125 V-dc distribution panel 2C.

To summarize manual actions and licensee commitments:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Manual operator actions can be performed to regain control of the transfer relays associated with the PORVs and the reactor head vent valves, restoration of the battery room ventilation system, manual control of the TDAFW pump, manual control of one main steam atmospheric relief valve, manual service water valve line up to the service water pond, and the isolation or RCS and pressurizer sampling line isolation valves.

- Licensee has also committed to install heat collectors on the sidewall mounted sprinkler/spray nozzles in room 2161, seal a floor slab blackout on elevation 121 feet - 0 inches and install a raceway fire barrier in the boric acid room 2186.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9925, DCP 03-2-9927, DCP 03-2-9930, and DCP 03-2-9899.

The portion of this exemption that support separation within the fire area are no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

A non fire-rated steel hatch exists between rooms 2163 (fire area 2-004) and room 2103 (fire area 2-001). That portion of the exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

### Licensing Basis

Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q2R42B0001A, breakers LA13, LA20; Q2R42B0001B, breakers LB14. Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2101	2101 Waste Gas Decay Tank Room	—	E, R, S, N	R, B	Detection System, 2A-100-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-100-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-101/2101-U1-1/U2-1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-102/2102-U1-1/U2-1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2101/2151-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2102/2151-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2102/2104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2101/2103-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2102/2103-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2101/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2102	2102 Valve Compartment Room	—	—	—	—
2103	2103 Corridor	—	E, R, S, N	R, B	Detection System, 2A-100-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-100-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-100-6: -- EEEE/LA: Required to support an Engineering Evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2105/2152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2105/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2106/2164-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2103/2104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2107/2106-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2101/2103-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2102/2103-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2105/2109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2106/2108-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2106/2109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2107/2103-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2103/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2104/2105-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. 
2104	2104 Passageway to Unit 1	—	E, R, S, N	E, R, B	Detection System, 2A-100-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-100-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-100-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-104/2104-U1-1/U2-1-83: 

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2104/2152-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2104/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2109/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2110/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2110/2169-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2110/2169-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2102/2104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2103/2104-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2108/2109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2110/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2105/2109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2106/2109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2109/2118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2109/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2110/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2116/2110-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2104/2105-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2110-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. Plant staff Training, U2-1-AUX BUILDING-2104-Plant staff Training: -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-1-AUX BUILDING-2104-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2105	2105 Catalytic H2 Recombiner 1A Room	—	—	—	—
2106	2106 Catalytic H2 Recombiner 1B Room	—	—	—	—
2108	2108 Waste Monitor Tank Room	—	E, R, D	R, B	Detection System, 2A-100-8: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2108/2166-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2108/2167-1/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2108/2109-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2106/2108-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2107/2108-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2108/2118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2108/2119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2108/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2109	2109 Waste Monitor Tank Pump Room	—	—	—	—
2110	2110 Monitor Control Panel Room	—	—	—	—
2111	2111 Containment Spray Pump Room 1A	—	E, R, S, N	R, B	Detection System, 2A-100-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2111/2162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2111/2170-1/5-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2111/2171-1/5-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2111/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2111/2184-1/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2111/2115-1/1-83:



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-Elev 2/2111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2111/2113-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2111/2114-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2111/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 2/2111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/2111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2112/2111-1/1-88: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2111/2113-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2111/2115-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2111/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2112/2111-1/1-88: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2112	2112 Access to Tendon Access Gallery	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2112/2183-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2112/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2112/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2112/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2112/2111-1/1-88: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2112/2111-1/1-88: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2113	2113 Valve Encapsulation	—	E, R, S, N	R, B	Detection System, 2A-100-21: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2113/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2111/2113-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2113/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2113/2225-20/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2111/2113-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2113/2114-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2114	2114 Pipe Chase	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2114/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2111/2114-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2114/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2113/2114-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2114/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2115	2115 Hallway	—	E, R, S	E, R, B	Detection System, 2A-100-23: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U2-FNP-Ceiling-2115/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2111/2115-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2115/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2115-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2111/2115-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2115/2125-1/1-83:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2118	2118 Floor Drain Tank Room	—	E, R, D	R, B	-- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-1-AUX BUILDING-2115-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 2A-100-12: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2118/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2118/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2108/2118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2109/2118-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2118/2128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2118/2119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2119	2119 Waste Holdup Tank Room	—	E, R, S, N	R, B	Detection System, 2A-100-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2119/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2108/2119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2119/2128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2118/2119-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2119/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2120	2120 Corridor	—	E, R, D	R, B	Detection System, 2A-100-14: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2120/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2118/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2120/2121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2120/2122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2109/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2110/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2120/2131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2121/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2116/2120-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2120/2128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2129/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2121	2121 Floor Drain Tank Pump Room	—	E, R, S, N	R, B	Detection System, 2A-100-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2121/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2120/2121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2121/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2122/2121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2117/2121-9/8-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2122	2122 Waste Evaporator Feed Pump Room	—	E, R, S, N	R, B	-- Risk: Required to meet Risk criteria. Detection System, 2A-100-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2122/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2120/2122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2122/2121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2129/2122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2123	2123 Pipe Chase	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2123/2246-1/9-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2117/2123-9/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2117/2123-9/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2123/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2127/2123-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2121-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2185-6/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2124/2123-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2126/2123-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2124	2124 Valve Encapsulation	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2124/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2117/2124-9/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2124/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2124/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2124/2123-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2126/2124-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2125	2125 Containment Spray Pump Room 1B	—	E, R, S, N	R, B	Detection System, 2A-100-22: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2125/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2110/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2116/2125-8/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2124/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2126/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2113/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2114/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2115/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2125/2127-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2125/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2125-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2124/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2111/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2114/2125-1/1-83: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2126	2126 Pipe Chase	—	—	R, B	<p>FireBarrier, U2-FNP-W-2115/2125-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2126/2184-1/1-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2126/2125-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2126/2129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-W-2126/2123-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-W-2126/2124-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
2127	2127 Pipe Chase	—	—	R, B	<p>FireBarrier, U2-FNP-Ceiling-2127/2184-1/1-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2127/2129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2127/CTMT-1/55-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2125/2127-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2127/2129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-S-2127/2123-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-W-2127/2129-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
2128	2128 RHR Heat Exchanger Room	—	E, R, D	R, B	<p>Detection System, 2A-100-17:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2128/2185-1/6-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2128/STAIR 1-1/S01-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2118/2128-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2119/2128-1/1-83:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2128/OUTSIDE-1/YARD-83:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2129	2129 RHR Low Head Pump Room	—	E, R, S, N	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2120/2128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2131/2128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.  Detection System, 2A-100-18: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2129/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2129/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2127/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2129/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2126/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2127/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2129/2122-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2130/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2131/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2127/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2129/2120-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2130	2130 Pipe Chase	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2130/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2130/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2130/2131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2130/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2130/2131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2131	2131 RHR Low Head Pump Room	—	E, R, S, N	R, B	Detection System, 2A-100-19: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2131/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2131/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2131/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2120/2131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2130/2131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2131/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2131/2129-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2130/2131-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2131/2128-1/1-83: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2169	2169 Duct and Pipe Chase	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2110/2169-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2110/2169-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2169/2224-1/18-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2169/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2169/2116-1/8-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2169/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2169/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2169-S02/1-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2183	2183 Tendon Access Gallery Entrance	—	E, R, S, N	E, R, B	Detection System, 2A-100-20: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-101-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-102-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2111/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2111/2184-1/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2112/2183-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2112/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2113/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2114/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2115/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2124/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2125/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2126/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2127/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2129/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2131/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2183/2216-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2183/2223-1/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2184/2223-1/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2116/2184-8/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2117/2184-9/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2169/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2123/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2162/2184-4/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2183/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2184/2189-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2184/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2183/2171-1/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2184/STAIR 2-1/S02-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2171/2183-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2182/2183-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2184/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Restricted transient controls, U2-1-AUX BUILDING-2183-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2184	2184 Piping Penetration Room, El. 100'-0"	—	—	—	—
2196	2196 Access to Tendon Access Gallery	—	—	R, B	FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-001 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2223	2223 Piping Penetration Room, El. 121'-0"	D	E, R, S, N	R, B	<p>Detection System, 2A-45-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2172/2223-5/1-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2181/2223-5/1-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2182/2223-5/1-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2183/2223-1/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2184/2223-1/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2223/2333-1/35-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2223/2334-1/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2223/2347-1/35-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2116/2223-8/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2216/2223-4/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2217/2223-9/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2235/2223-23/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2236/2223-6/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2246/2223-9/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2209/2223-4/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2217/2223-4/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2217/2223-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2218/2223-4/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2223/CTMT-1/55-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2246/2223-9/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 2/2223-S02/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2222/2223-4/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-001 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-2223/2233-1/21-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-1-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-45-2: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2151-U1	2151 Waste Gas Decay Tank Rooms	
2152-U1	2152 Valve Compartment Room	
2153-U1	2153 Waste Gas Compressor Room	
2154-U1	2154 Waste Evaporator Steam Generator Room	
2154A-U1	2154A Valve Compartment Room	
2155-U1	2155 Passageway to Unit 1	
2156-U1	2156 Holdup Tank Room	
2157-U1	2157 Holdup Tank Room	
2158-U1	2158 Holdup Tank Room	
2159-U1	2159 Recycle Evaporator Feed Pump Room	
2160-U1	2160 Hatch Area	
2161-U1	2161 Corridor	
2162-U1	2162 Hallway	
2163-U1	2163 WDS Control Panel Room	
2164-U1	2164 Storage Room	
2165-U1	2165 Waste Gas Decay Tank Room	
2166-U1	2166 Waste Gas Decay Tank Room	
2168-U1	2168 Chemical Drain Tank Room	
2170-U1	2170 Letdown Heat Exchanger Room	
2175-U1	2175 Hallway	
2176-U1	2176 Secondary Spent-Resin Storage Tank Room	
2177-U1	2177 Pump Room	
2178-U1	2178 Filter Room	
2180-U1	2180 Recycle Evaporator Steam Generator Room	
2186-U1	2186 Boric Acid Area	
2187-U1	2187 Hydro Test Pump Room	
2188-U1	2188 Boric Acid Tank Area	
2203-U1	2203 Waste Condenser Tanks and Pump Room	
2204-U1	2204 Waste Evaporator Package Room	
2205-U1	2205 Passageway to Unit 1	
2206-U1	2206 Heat Exchanger Room	
2207-U1	2207 Hatch Area	
2208-U1	2208 Corridor	
2209-U1	2209 Hallway	
2215-U1	2215 Duct and Pipe Chase	
2216-U1	2216 Valve Compartments Area	
2217-U1	2217 Volume Control Tank Room	
2218-U1	2218 Chiller Unit Room	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2219-U1	2219 Pipe Chase	
2220-U1	2220 Valve Compartment Room	
2221-U1	2221 Primary Spent-Resin Storage Tank Room	
2222-U1	2222 Corridor	
2230-U1	2230 Recycle Evaporator Package Room	
2231-U1	2231 Sluice Pump Room	
2232-U1	2232 Sluice Filter Room	
2237-U1	2237 Corridor	
2238-U1	2238 Cask Storage Area	
2239-U1	2239 Transfer Canal	
2240-U1	2240 Spent-Fuel Pool Room	
2253-U1	2253 Valve Compartment	
2301-U1	2301 Seal Water Filter Room	
2302-U1	2302 Recycle Evaporator Feed Filter Room	
2303-U1	2303 Reactor Coolant Filter Room	
2304-U1	2304 Waste Monitor	
2305-U1	2305 Seal Injection Filter Room	
2306-U1	2306 Recycle Evaporator Feed Demineralizer Room	
2307-U1	2307 Valve Compartment Room	
2308-U1	2308 Waste Condensate and Monitor Tank Demineralizer Room	
2309-U1	2309 Hatch Area	
2310-U1	2310 Valve Compartment Room	
2311-U1	2311 Recycle Evaporator Concentrates Filter Room	
2312-U1	2312 Corridor	
2313-U1	2313 Floor Drain and Laundry Tank Filter Room	
2314-U1	2314 Waste Evaporator Feed Filter Room	
2315-U1	2315 Recycle Waste Condenser Filter Room	
2316-U1	2316 Passageway to Unit 1	
2321-U1	2321 Sample Panel Room	
2322-U1	2322 Hallway	
2323-U1	2323 Sample Room	
2324-U1	2324 Primary Chemistry Lab	
2325-U1	2325 Counting Room/Spectro-photometer Lab	
2326-U1	2326 Clean Storage Room	
2327-U1	2327 Valve Access Area	
2328-U1	2328 BTR Demineralizer Room	
2329-U1	2329 Pipe Tunnel	
2330-U1	2330 Chiller Surge Tanks Pump Room	



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2331-U1	2331 Valve Access Area	
2332-U1	2332 MCC 1A/2A Area	
2340-U1	2340 Demineralizer Compartment	
2341-U1	2341 Pipe Chase	
2342-U1	2342 Spent-Fuel Pool Pump Room	
2348-U1	2348 Cask Wash Area	
2351-U1	2351 Chiller Pump and Surge Tank Room	
2402-U1	2402 Passage to Unit 1	
2403-U1	2403 Respirator Issue Room/Combustible Storage Room	
2405-U1	2405 Hatch Room	
2406-U1	2406 Tool Room	
2408-U1	2408 Hallway	
2409-U1	2409 Hallway	
2410A-U1	2410A 600-V Load Center	
2418-U1	2418 Auxiliary Building and Containment Purge Vent Equipment Room	
2419-U1	2419 Demineralizer Hatch Area	
2422-U1	2422 Corridor	
2423-U1	2423 Valve Compartment	
2424-U1	2424 Demineralizer Compartments	
2425-U1	2425 Demineralizer Compartments	
2426-U1	2426 Demineralizer Compartments	
2427-U1	2427 Demineralizer Compartments	
2429-U1	2429 Containment Purge Air Equipment Room	
2431-U1	2431 Duct/Pipe Chase	
2445-U1	2445 Spent-Fuel Pool Heat Exchanger Room	
2446-U1	2446 Hallway	
2448-U1	2448 SFPC Pump Room	
2449-U1	2449 Demineralizer Room	
2450-U1	2450 Valve Compartment	
2451-U1	2451 Filter Room	
2467-U1	2467 SFP Heat Exchanger Room	
2478-U1	2478 Motor Control Center Room	
2504-U1	2504 Stair No. 6, Floor El. 184'-0"	
2505-U1	2505 Spent-Fuel Pool Vent Equipment Room	
2604-U1	2604 Passage	
2605-U1	2605 Blowdown Pumps and Surge Tank Room	
2606-U1	2606 Filter Room	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2607-U1	2607 Filter Room	
2608-U1	2608 Blowdown Heat Exchanger Room	
2609-U1	2609 Storage Room	
2610-U1	2610 Valve Compartment Room	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2151-U1 - 2151 Waste Gas Decay Tank Rooms

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-1	U2-4 Detection System 2A-102-1 Room 2151	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-2	U2-4 Detection System 2A-102-2 Room 2152	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-5	U2-4 Detection System 2A-102-5 Room 2165	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-6	U2-4 Detection System 2A-102-6 Room 2166	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-151/2151-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-152/2152-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2151/151-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2152/152-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2101/2151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2102/2151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2104/2152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2105/2152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2107/2165-90/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2108/2166-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2201-4/14-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2202-4/15-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2254-4/12-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2152/2202-4/15-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2152/2210-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2211-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2212-4/16-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2166/2211-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2166/2226-4/19-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2151-U1 - 2151 Waste Gas Decay Tank Rooms	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2151/2153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2151/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2166/2167-4/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2163-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2166/2185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2164/2165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2107/2165-90/4-100: 2-083-111-05	0:00, F. of 2165	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2212-4/16-100: 2-121-115-16	0:00, F. of 2244	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2152-U1 - 2152 Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2153-U1 - 2153 Waste Gas Compressor Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-3	U2-4 Detection System 2A-102-3 Room 2153	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-153/2153-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2151/2153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2153/2154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2153/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2154-U1 - 2154 Waste Evaporator Steam Generator Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-7	U2-4 Detection System 2A-101-7 Room 2177	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-101-8	U2-4 Detection System 2A-101-8 Room 2178	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-4	U2-4 Detection System 2A-102-4 Room 2154	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-1	U2-4 Detection System 2A-25-1 Room 2160	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-2	U2-4 Detection System 2A-25-2 Room 2161	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-3	U2-4 Detection System 2A-25-3 Room 2162	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-4	U2-4 Detection System 2A-25-4 Room 2163	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-5	U2-4 Detection System 2A-25-5 Room 2164	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-7	U2-4 Detection System 2A-25-7 Room 2154A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2154-U1 - 2154 Waste Evaporator Steam Generator Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-25-8	U2-4 Detection System 2A-25-8 Room 2155	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-25-2	Preaction Sprinkler System, U2-4, Passageway to Unit 1, Room 2155	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-25-3	Preaction Sprinkler System, U2-4, Hatch Area, Room 2160	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-25-4	Preaction Sprinkler System, U2-4, Corridor, Room 2161	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-25-5	Preaction Sprinkler System, U2-4, Hallway, Room 2162	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-25-6	Preaction Sprinkler System, U2-4, WDS Control Panel Room, Room 2163	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-154/2154-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-155/2155-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2104/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2105/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2106/2164-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2111/2162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2154/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2215-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2163/2213-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2163/2214-4/17-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2210-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2212-4/16-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2213-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2177/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2178/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2178/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2154-U1 - 2154 Waste Evaporator Steam Generator Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2151/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2153/2154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2155/2156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2176/2177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Floor-2161/2208-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2163-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2153/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2160/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2161/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2161/2173-4/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2162/2184-4/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2160-S08/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2150/2160-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2167/2164-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2168/2163-1/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2169/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2172/2161-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2173/2160-5/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2179/2177-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2178-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2150/2160-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2164/2165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2160-S08/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2168/2163-1/4-100: 2-100-113-04	0:00, N. of 2163	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2177-96/4-100: 2-100-114-03	0:00, N. of 2177	-	-	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2178-96/4-100: 2-100-114-04	0:00, N. of 2178	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2154-U1 - 2154 Waste Evaporator Steam Generator Room

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-155/2155-U1-4/U2-4-100 150	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 152	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 153	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2150/2160-89/4-100 2185	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2172/2161-5/4-100 2155	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2162-S02/4-100 2159	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2160-S08/4-100 2154	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2154-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2155-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2160-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2161-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2162-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2154A-U1 - 2154A Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2155-U1 - 2155 Passageway to Unit 1	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2156-U1 - 2156 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-1	U2-4 Detection System 2A-104-1 Room 2156	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-156/2156-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2156/156-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2155/2156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2156/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2157-U1 - 2157 Holdup Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-2	U2-4 Detection System 2A-104-2 Room 2157	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2157/157-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-157/2157-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2158-U1 - 2158 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-3	U2-4 Detection System 2A-104-3 Room 2158	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2158/158-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-158/2158-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2159-U1 - 2159 Recycle Evaporator Feed Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-1	U2-4 Detection System 2A-101-1 Room 2159	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2159/159-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2160-U1 - 2160 Hatch Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2140/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2140/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2161-U1 - 2161 Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A77	Aux.Bldg.-100'-South Corridor West End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A79	Aux.Bldg.-100'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2162-U1 - 2162 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A78	Aux.Bldg.-100'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2163-U1 - 2163 WDS Control Panel Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2164-U1 - 2164 Storage Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

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Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2165-U1 - 2165 Waste Gas Decay Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2166-U1 - 2166 Waste Gas Decay Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2168-U1 - 2168 Chemical Drain Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-25-6	U2-4 Detection System 2A-25-6 Room 2168	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2109/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2110/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2168/2224-4/18-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2168/2225-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2167/2168-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2168/2185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2168/2163-1/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2169/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2168/2163-1/4-100: 2-100-113-04	0:00, N. of 2163	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2169/2168-1/4-100: 2-100-113-03	0:00, E. of 2168	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2170-U1 - 2170 Letdown Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-2	U2-4 Detection System 2A-101-2 Room 2170	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2111/2170-1/5-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2170/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2170/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2170/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2170/2172-4/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2161/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2171/2170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2171/2170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2171/2170-5/4-100 2163	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2170-U1 - 2170 Letdown Heat Exchanger Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2175-U1 - 2175 Hallway	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-118-1	U2-4 Detection System 2A-118-1 Room 2175	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-118-1	Preaction Sprinkler System, U2-4, Southeast Corridor, Room 2175	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2175/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2175/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2175/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2173/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2174/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2175/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2175/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2181/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2175/2186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2175-U1 - 2175 Hallway	

Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2176-U1 - 2176 Secondary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2176/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2175/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2176/2177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2160/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2176/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2177-U1 - 2177 Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2178-U1 - 2178 Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2180-U1 - 2180 Recycle Evaporator Steam Generator Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-10	U2-4 Detection System 2A-101-10 Room 2180	-	Yes		Yes	-
2A-101-14	U2-4 Detection System 2A-101-14 Room 2186	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-101-15	U2-4 Detection System 2A-101-15 Room 2187	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2180/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2187/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2172/2186-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2175/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2175/2186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2176/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2179/2187-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/CTMT-4/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2187/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2179/2180-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2180-U1 - 2180 Recycle Evaporator Steam Generator Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2179/2187-96/4-100: 2-100-114-01	0:00, S. of 2187	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2179/2180-96/4-100: 2-100-114-02	0:00, W. of 2179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2179/2180-96/4-100 2184	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2186-U1 - 2186 Boric Acid Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-1	U2-4 Detection System 2A-103-1 Room 2188	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2188/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2188/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2188/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/2609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2187/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2188/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2188/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2187-U1 - 2187 Hydro Test Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2188-U1 - 2188 Boric Acid Tank Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2203-U1 - 2203 Waste Condenser Tanks and Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-4	U2-4 Detection System 2A-103-4 Room 2218	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-103-9	U2-4 Detection System 2A-103-9 Room 2237	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-104-4	U2-4 Detection System 2A-104-4 Room 2203	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-104-9	U2-4 Detection System 2A-104-9 Room 2253	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-1	U2-4 Detection System 2A-35-1 Room 2207	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-2	U2-4 Detection System 2A-35-2 Room 2208	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-3	U2-4 Detection System 2A-35-3 Room 2209	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-4	U2-4 Detection System 2A-35-4 Room 2222	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-5	U2-4 Detection System 2A-35-5 Room 2205	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2203-U1 - 2203 Waste Condenser Tanks and Pump Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-35-1	Preaction Sprinkler System, U2-4, Hatch Area, Room 2207	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-35-2	Preaction Sprinkler System, U2-4, Hallway, Room 2209	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-203/2203-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2205/205-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-253/2253-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2140/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2140/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2150/2207-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2170/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2172/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2173/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2174/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2175/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2175/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2178/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2203/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2203/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2205/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2207/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/STAIR 8-4/S08-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2312-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2209/2322-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2203-U1 - 2203 Waste Condenser Tanks and Pump Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2209/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2215/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2222/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2237/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2203/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2204/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2604-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2209-17/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2218/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2237/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2245/2209-20/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2203-51/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Floor-2161/2208-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2204/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2206/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2218/2223-4/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/2239-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2156/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2203-U1 - 2203 Waste Condenser Tanks and Pump Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2188/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2202/2203-15/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2209/2210-4/20-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 2209/2210 and fire areas 4/20	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2237/CTMT-4/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2601/2207-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2208-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2605/2208-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2150/2207-89/4-100: 2-100-114-05	0:00, C. of 2150	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2150/2207-89/4-100: 2-100-114-06	0:00, C. of 2150	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2218/2222-4/4-121: 2-121-117-05	0:00, E. of 2222	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2245/2209-20/4-131: 2-131-115-01	0:00, E. of 2245	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2205/205-U2-4/U1-4-121 202	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121 203	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121 204	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2209-S02/4-121 2212	0:00,	-	Yes		Yes	-
U2-FNP-W-STAIR 8/2207-S08/4-121 2205	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2205-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2207-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2209-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2204-U1 - 2204 Waste Evaporator Package Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-5	U2-4 Detection System 2A-104-5 Room 2204	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-204/2204-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2204/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2203/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2204/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2204/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2205-U1 - 2205 Passageway to Unit 1	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

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Active Fire Protection - Suppression

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Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2206-U1 - 2206 Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-6	U2-4 Detection System 2A-104-6 Room 2206	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2206/206-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2206/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2207-U1 - 2207 Hatch Area	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

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Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2208-U1 - 2208 Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A72	Aux.Bldg.-121'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A73	Aux.Bldg.-121'-South Corridor East End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2209-U1 - 2209 Hallway	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2215-U1 - 2215 Duct and Pipe Chase

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2162/2215-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2215/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2215-17/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2215/STAIR 2-4/S02-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2402/2215-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2215-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2215-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/2318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/471-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2214/2215-17/4-121: 2-121-115-19	0:00, E. of 2214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2317-4/34-139: 2-139-118-01	0:00, N. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2215-U1 - 2215 Duct and Pipe Chase

Systems and Features

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2216-U1 - 2216 Valve Compartments Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-2	U2-4 Detection System 2A-103-2 Room 2216	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2170/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2171/2216-5/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2183/2216-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2216/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2217-U1 - 2217 Volume Control Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-3	U2-4 Detection System 2A-103-3 Room 2217	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2170/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2171/2217-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2217/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2217/2223-4/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2217/2223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2218-U1 - 2218 Chiller Unit Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

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Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2219-U1 - 2219 Pipe Chase

### Systems and Features

#### Extinguishers

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#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2178/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2219/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2219-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2220-U1 - 2220 Valve Compartment Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-5	U2-4 Detection System 2A-103-5 Room 2220	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2177/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2179/2220-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/STAIR 8-4/S08-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2220/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2220/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2221-U1 - 2221 Primary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2176/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2221/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2221/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2221/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2220/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2222-U1 - 2222 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A74	Aux.Bldg.-121'-East Corridor North End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-35-3	Preaction Sprinkler System, U2-4, Corridor, Room 2222	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2230-U1 - 2230 Recycle Evaporator Package Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-6	U2-4 Detection System 2A-103-6 Room 2230	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2175/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2180/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2221/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2231-U1 - 2231 Sluice Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-7	U2-4 Detection System 2A-103-7 Room 2231	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2179/2231-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2231/2231-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2231/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2220/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2231/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2231/2208-4/4-121 2228	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2232-U1 - 2232 Sluice Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-8	U2-4 Detection System 2A-103-8 Room 2232	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2187/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2231/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2231/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2188/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2231/2208-4/4-121 2228	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2237-U1 - 2237 Corridor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2238-U1 - 2238 Cask Storage Area

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-1	U2-4 Detection System 2A-107-1 Room 2238	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-3	U2-4 Detection System 2A-107-3 Room 2240	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2237/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2239/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2238-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/2239-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2447/2348-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2448-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2238/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2238-U1 - 2238 Cask Storage Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2348-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2459/2240-39/4-155: 2-155-106-01	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155: 2-155-106-02	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155: 2-155-106-03	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2348-39/4-155: 2-155-106-04	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2447/2348-98/4-155 2434	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2239-U1 - 2239 Transfer Canal	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2240-U1 - 2240 Spent-Fuel Pool Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2253-U1 - 2253 Valve Compartment	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2301-U1 - 2301 Seal Water Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-105-1	U2-4 Detection System 2A-105-1 Room 2301	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-10	U2-4 Detection System 2A-105-10 Room 2315	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-18	U2-4 Detection System 2A-105-18 Room 2303	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-105-2	U2-4 Detection System 2A-105-2 Room 2302	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-3	U2-4 Detection System 2A-105-3 Room 2304	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-4	U2-4 Detection System 2A-105-4 Room 2305	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-7	U2-4 Detection System 2A-105-7 Room 2311	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-8	U2-4 Detection System 2A-105-8 Room 2313	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-9	U2-4 Detection System 2A-105-9 Room 2314	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2301-U1 - 2301 Seal Water Filter Room

**Systems and Features**

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-302/2302-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-303/2303-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-304/2304-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-305/2305-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2301/301-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2301/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2302/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2303/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2304/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2305/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2311/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2313/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2314/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2315/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2305/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2311/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2313/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2301/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2307/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2315/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2301-U1 - 2301 Seal Water Filter Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2302-U1 - 2302 Recycle Evaporator Feed Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2303-U1 - 2303 Reactor Coolant Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2304-U1 - 2304 Waste Monitor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2305-U1 - 2305 Seal Injection Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2306-U1 - 2306 Recycle Evaporator Feed Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-306/2306-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2306/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2305/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2306/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2306/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2307-U1 - 2307 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-105-5	U2-4 Detection System 2A-105-5 Room 2307	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-6	U2-4 Detection System 2A-105-6 Room 2310	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-1	U2-4 Detection System 2A-48-1 Room 2309	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-2	U2-4 Detection System 2A-48-2 Room 2312	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-3	U2-4 Detection System 2A-48-3 Room 2316	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-5	U2-4 Detection System 2A-48-5 Room 2322	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-6	U2-4 Detection System 2A-48-6 Room 2327	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
2A-48-7	U2-4 Detection System 2A-48-7 Room 2330	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-9	U2-4 Detection System 2A-48-9 Room 2332	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-49-4	U2-4 Detection System 2A-49-4 Room 2325	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2307-U1 - 2307 Valve Compartment Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-48-1	Preaction Sprinkler System, U2-4, Passageway to Unit 1, Room 2316	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-48-2	Preaction Sprinkler System, U2-4, Hallway, Room 2322	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2188/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2205/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2207/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2312-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2322-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2221/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2222/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2237/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2307/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2309/2406-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2310/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2312/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2316/2403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2327/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2332/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2332/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2308/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2309/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2317/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2322/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2324/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2326/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2307-U1 - 2307 Valve Compartment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2327/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2330/2609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2238-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2347/2332-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2403/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2306/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2307/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2308/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2309/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2311/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2313/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2317/2322-34/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2322/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2332/CTMT-4/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2322-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2330/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2342/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2347/2325-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2301/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2307/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2315/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2342/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2601/2309-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2605/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2605/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-STAIR 8/2312-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2307-U1 - 2307 Valve Compartment Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2317/2316-4/34-139: 2-139-118-03	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2317/2322-34/4-139: 2-139-118-02	0:00, N. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139 302	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 304	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2307/2309-4/4-139 2538	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-N-2317/2322-34/4-139 2311	0:00,	-	Yes		Yes	Yes
U2-FNP-N-2322/2334-4/34-139 2317	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2322/2334-4/34-139 2317A	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-S-2342/2330-4/4-139 2320	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-STAIR 2/2322-S02/4-139 2316	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2312-S08/4-139 2305	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2309-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2312-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2316-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2322-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2308-U1 - 2308 Waste Condensate and Monitor Tank Demineralizer Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-308/2308-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2308/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2306/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2308/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2308/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2309-U1 - 2309 Hatch Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2307/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2307/2309-4/4-139 2538	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-N-2310/2309-4/4-139 2537	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2310-U1 - 2310 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2310/2309-4/4-139 2537	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2311-U1 - 2311 Recycle Evaporator Concentrates Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2312-U1 - 2312 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2312 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2313-U1 - 2313 Floor Drain and Laundry Tank Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2314-U1 - 2314 Waste Evaporator Feed Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2315-U1 - 2315 Recycle Waste Condenser Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2316-U1 - 2316 Passageway to Unit 1	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2321-U1 - 2321 Sample Panel Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A63	Aux.Bldg.-139'-Sample Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-1	U2-4 Detection System 2A-49-1 Room 2321	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2216/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2321/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2321/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2321/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2321/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2322-U1 - 2322 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A62	Aux.Bldg.-139'-South Corridor West End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2323-U1 - 2323 Sample Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A92	Aux.Bldg.-139'-Sample Panel Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-2	U2-4 Detection System 2A-49-2 Room 2323	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2209/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2322/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2323/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2321/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2324-U1 - 2324 Primary Chemistry Lab	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-3	U2-4 Detection System 2A-49-3 Room 2324	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2203/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2217/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2324/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2324/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2321/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2324/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2333/2324-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2325-U1 - 2325 Counting Room/Spectro-photometer Lab

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A65	Aux.Bldg.-139'-Gas Analysis Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

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#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2326-U1 - 2326 Clean Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A64	Aux.Bldg.-139'-Counting Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-5	U2-4 Detection System 2A-49-5 Room 2326	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2218/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2326/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2326/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2347/2326-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2327-U1 - 2327 Valve Access Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2312 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2327/2332-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2328-U1 - 2328 BTR Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2208/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2328/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/2328-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2328/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2328-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2328-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2329-U1 - 2329 Pipe Tunnel

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2328/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2329/2604-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2329/2602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2329/2603-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2605/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-STAIR 10/2329-S10/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2330-U1 - 2330 Chiller Surge Tanks Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2330/2420-4/92-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2331-U1 - 2331 Valve Access Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-48-8	U2-4 Detection System 2A-48-8 Room 2331	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2188/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2231/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2331-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2331/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2332-U1 - 2332 MCC 1A/2A Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A66	Aux.Bldg.-139'-East Corridor Near MCC	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2327/2332-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2340-U1 - 2340 Demineralizer Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2221/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2340/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2340/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2340/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2331/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2341-U1 - 2341 Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/2341-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2342-U1 - 2342 Spent-Fuel Pool Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-48-10	U2-4 Detection System 2A-48-10 Room 2342	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2188/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2342/2445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2342/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2342/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2342/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2342/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2342/2330-4/4-139 2320	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2348-U1 - 2348 Cask Wash Area	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2351-U1 - 2351 Chiller Pump and Surge Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2402-U1 - 2402 Passage to Unit 1	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-57-1	U2-4 Detection System 2A-57-1 Room 2402	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-2402/471-U2-4/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2317/2402-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2402/2215-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2403/2402-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2403/2402-4/4-155: 2-155-122-04	0:00, E. of 2402	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155 401	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2403-U1 - 2403 Respirator Issue Room/Combustible Storage Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-112-1	U2-4 Detection System 2A-112-1 Room 2403	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-403/2403-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2316/2403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2317/2403-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2403/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2409-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2403/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2402-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2403/2317-4/34-139: 2-139-118-04	0:00, S. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2317-4/34-139: 2-139-118-05	0:00, S. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2409-4/4-155: 2-155-122-05	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-06	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-07	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-01	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-02	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-03	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2403-U1 - 2403 Respirator Issue Room/Combustible Storage Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2403/2317-4/34-139: 2-139-118-06	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2317-4/34-139: 2-139-118-07	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2402-4/4-155: 2-155-122-04	0:00, E. of 2402	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-08	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-09	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-14	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2403/2409-4/4-155 2464A	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U1 - 2405 Hatch Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A53	Aux.Bldg.-155'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-15	U2-4 Detection System 2A-107-15 Room 2409	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-6	U2-4 Detection System 2A-107-6 Room 2422	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-7	U2-4 Detection System 2A-107-7 Room 2423	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-9	U2-4 Detection System 2A-107-9 Room 2446	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-57-2	U2-4 Detection System 2A-57-2 Room 2408	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-57-3	U2-4 Detection System 2A-57-3 Room 2409	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-75-1	U2-4 Detection System 2A-75-1 Room 2405	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-75-2	U2-4 Detection System 2A-75-2 Room 2406	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-75-3	U2-4 Detection System 2A-75-3 Room 2419	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2405-U1 - 2405 Hatch Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-75-1	Preaction Sprinkler, U2-4, Elevation 155' Hatch Area Tool Room, Room 2405	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-75-2	Preaction Sprinkler, U2-4, Elevation 155' Hatch Area Tool Room, Room 2406	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-75-3	Preaction Sprinkler, U2-4, Elevation 155' Hatch Area Tool Room, Room 2419	-	Yes		Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-2406/406-U2-4/U1-4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-405/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-406/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-407/2408-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-441/2406-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2306/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2307/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2308/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2309/2406-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2310/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2312/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2317/2409-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2321/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2324/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2327/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2328/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2332/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2409-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2340/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2602/2405-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2603/2408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2405-U1 - 2405 Hatch Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2606/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 10/2422-S10/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/2405-S08/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2418/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2421/2422-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2445/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2447/2446-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/2405-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2408/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2422/2466-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2427/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2418/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2420/2405-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2421/2405-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2446/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2459/2446-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2405-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2418/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2420/2419-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2423/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2419-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U1 - 2405 Hatch Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-01	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-02	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155: 2-155-122-12	0:00, E. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155: 2-155-122-13	0:00, E. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2421/2422-92/4-155: 2-155-131-05	0:00, E. of 'B' SFP HEAT EXCH. RM	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2421/2422-92/4-155: 2-155-131-06	0:00, E. of 'B' SFP HEAT EXCH. RM	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2447/2446-98/4-155: 2-155-132-02	0:00, E. of 2447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-05	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-06	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-07	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155: 2-155-122-10	0:00, N. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155: 2-155-122-11	0:00, N. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2421/2405-92/4-155: 2-155-131-04	0:00, S. of 2421	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-406/2405-U1-4/U2-4-155 2403	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-407/2408-U1-4/U2-4-155 2404	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-441/2406-U1-4/U2-4-155 402	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155 2406	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2445/2446-4/4-155 2430	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-E-2445/2446-4/4-155 2446	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-N-2403/2409-4/4-155 2464A	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155 2408	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2422/2466-4/4-155 2461	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2422-S10/4-155 2431	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2418/2405-4/4-155 2409	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2459/2446-39/4-155 2432	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2409-S02/4-155 2411	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2405-S08/4-155 2407	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2418/2409-4/4-155 2466	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
 Fire Zone ID: 2405-U1 - 2405 Hatch Room

Systems and Features

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2405-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2406-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2408-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2409-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-
U2-4-AUX BUILDING-2422-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2406-U1 - 2406 Tool Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2408-U1 - 2408 Hallway	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2409-U1 - 2409 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A55	Aux.Bldg.-155'-Near CTMT Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2410A-U1 - 2410A 600-V Load Center	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-57-4	U2-4 Detection System 2A-57-4 Room 2410A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-50-1	Local CO2 system in Fire Area 4 , room number 2410A, 600V Load Center 2M	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2317/2410A-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-01	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-02	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-03	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2410A-U1 - 2410A 600-V Load Center

**Systems and Features**

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2418-U1 - 2418 Auxiliary Building and Containment Purge Vent Equipment Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-5	U2-4 Detection System 2A-107-5 Room 2418	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2324/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2326/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2333/2418-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2347/2418-35/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2418/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2418/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2418/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2418/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2418/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2347/2418-35/4-155: 2-155-120-06	0:00, F. of 2418	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2418/2405-4/4-155 2409	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2418/2409-4/4-155 2466	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2418-U1 - 2418 Auxiliary Building and Containment Purge Vent Equipment Room

**Systems and Features**

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2419-U1 - 2419 Demineralizer Hatch Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

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Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2422-U1 - 2422 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2423-U1 - 2423 Valve Compartment	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2424-U1 - 2424 Demineralizer Compartments

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2424/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2425-U1 - 2425 Demineralizer Compartments

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2607/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2424/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2425/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2426-U1 - 2426 Demineralizer Compartments

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2425/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2426/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2427-U1 - 2427 Demineralizer Compartments

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2426/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2427/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2429-U1 - 2429 Containment Purge Air Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A52	Aux.Bldg.-155'-Radwaste Vent. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-108-1	U2-4 Detection System 2A-108-1 Room 2429	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-471/2429-U0-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2429-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2429-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2429/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2429-43/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2429/2241-4/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2429-S02/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2334/2429-34/4-155: 2-155-119-11	0:00, F. of 2429	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2429-U1 - 2429 Containment Purge Air Equipment Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2429/CTMT-4/55-155 2467	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2429-43/4-155 2484	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2429-S02/4-155 2447	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2429-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2431-U1 - 2431 Duct/Pipe Chase	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2445-U1 - 2445 Spent-Fuel Pool Heat Exchanger Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-11	U2-4 Detection System 2A-107-11 Room 2448	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
2A-107-8	U2-4 Detection System 2A-107-8 Room 2445	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2342/2445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2445/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2448-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2202-20/15-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2447/2445-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2447/2448-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2448/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2447/2448-98/4-155: 2-155-132-01	0:00, W. of 2447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes



Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2445-U1 - 2445 Spent-Fuel Pool Heat Exchanger Room	

Fire Doors						
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2445/2446-4/4-155 2430	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-E-2445/2446-4/4-155 2446	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2446-U1 - 2446 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A56	Aux.Bldg.-155'-New Fuel Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

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### Fire Barriers

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### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2448-U1 - 2448 SFPC Pump Room	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2449-U1 - 2449 Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2342/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2445/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2448/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2450/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2450-U1 - 2450 Valve Compartment	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2451-U1 - 2451 Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2342/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2450/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2451/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2467-U1 - 2467 SFP Heat Exchanger Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-13	U2-4 Detection System 2A-107-13 Room 2467	-	Yes		Yes	-

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2408/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2446/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2423/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2467/2421-4/92-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2478-U1 - 2478 Motor Control Center Room

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-14	U2-4 Detection System 2A-107-14 Room 2478	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2332/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2418/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2478/2420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/2478-DU-ABVB-A/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/2478-DU-ABVB-B/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2238/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2451/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2478/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Fire Zone ID:** 2478-U1 - 2478 Motor Control Center Room

**Systems and Features**

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2504-U1 - 2504 Stair No. 6, Floor El. 184'-0"	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-109-1	U2-4 Detection System 2A-109-1 Room 2504	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2459/2504-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2505-U1 - 2505 Spent-Fuel Pool Vent Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A87	Aux.Bldg.-184'-SFP Vent Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A88	Aux.Bldg.-184'-SFP Vent Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-109-2	U2-4 Detection System 2A-109-2 Room 2505	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2459/2505-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2604-U1 - 2604 Passage	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-105-11	U2-4 Detection System 2A-105-11 Room 2604	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-12	U2-4 Detection System 2A-105-12 Room 2605	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-13	U2-4 Detection System 2A-105-13 Room 2606	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-14	U2-4 Detection System 2A-105-14 Room 2607	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-15	U2-4 Detection System 2A-105-15 Room 2608	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-16	U2-4 Detection System 2A-105-16 Room 2609	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-17	U2-4 Detection System 2A-105-17 Room 2610	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2604-U1 - 2604 Passage

Systems and Features

### Active Fire Protection - Suppression

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2604/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2605/2420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2605/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2606/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2607/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2609/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/2609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2604-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2330/2609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2606/2607-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/2341-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2606-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2610-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2329/2604-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2602/2604-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2603/2604-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2604/2605-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2604/2610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2605/2609-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2606/2608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2607/2608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2605/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2606/2610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2607/2610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2604-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2605/2208-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2605/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2605/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2608/2609-4/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2605-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2604-U1 - 2604 Passage	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-STAIR 10/2609-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 10/2608-S10/4-131 2334	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2602/2604-4/93-131 2329	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2604-S10/4-131 2333	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2609-S10/4-131 2335	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2604-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2605-U1 - 2605 Blowdown Pumps and Surge Tank Room

Systems and Features

Extinguishers

Hose Stations

Active Fire Protection - Detection

Active Fire Protection - Suppression

Fire Barriers

Fire Dampers

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2606-U1 - 2606 Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2607-U1 - 2607 Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2608-U1 - 2608 Blowdown Heat Exchanger Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U1 - Aux Building  
Fire Zone ID: 2609-U1 - 2609 Storage Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U1 - Aux Building	Systems and Features
Fire Zone ID:	2610-U1 - 2610 Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Performance-based approach Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 8, TE-BE-03-9899-001 Technical Evaluation in Support of GL 86-10 for DCP 03-2-9899, Reroute Cables For RWST Suction Valve Q2E21LCV0115D-B
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<b>Inactive</b>	Yes
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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The purpose of the evaluation is to assess the adequacy of the separation for redundant trains of the RWST suction valves. The valves are not separated in accordance with the requirements of Appendix R, Section III.G.2 in that the area of spatial separation is not provided with whole area suppression.

Bases for Acceptability:

The acceptability of the evaluation is based on spatial separation, location of combustibles, limited in situ combustibles, whole area detection with partial suppression, and fire barriers. In addition, administrative controls have been established to maintain the non-suppressed area free of transient combustibles or to establish compensatory actions.

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-004-U1 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li> <li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li> <li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-37), Unit 2 Auxiliary Building, Elevations 100, 121, 130, 139, 155, and 184 ft. (Fire Area 2-004) ), Enclosure of one train with a 1 hour rated fire barrier with automatic fire suppression and detection (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression and lack of separation of redundant trains by 3 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>For power distribution system:</p> <ul style="list-style-type: none"> <li>• The redundant MCCs 2A and 2B are separated by a 2-ft-thick reinforced concrete floor at el 139 ft - 0 in.</li> <li>• Unsealed penetrations have been reviewed and will not affect separation.</li> <li>• Minimum horizontal separation between components is approximately 66 feet with complete automatic suppression coverage at el 121 ft - 0 in.</li> <li>• The redundant dc distribution panels 2C and 2F are separated by a 2-ft-thick reinforced concrete floor at el 139 ft.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

Previously Approved Engineering Evaluations

- The minimum horizontal separation between these redundant panels is approximately 55 ft and has complete automatic suppression coverage at el 121 ft - 0 in.
- A smoke detection system is installed in all rooms containing the subject equipment.
- Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on the subject elevations.
- Manual actions can be performed to establish control of the atmospheric relief valves by closing the manual air vent valve to bleed off air from the diaphragm of the valve actuator, and thus control steam generator pressure and reactor coolant system temperature with the use of the manually controlled atmospheric relief valves.

For Instrumentation - condensate water storage tank level indication

- Redundant cables are separated by two, 2-ft-thick reinforced concrete floors at el 139 ft - 0 in. and 155 ft - 0 in. Unsealed penetrations have been reviewed and will not affect the separation.
- The Train-B cabling at el 121 ft - 0 in. is provided with automatic fixed suppression over 95 percent of its route.
- A smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations, portable carbon dioxide extinguishers, and portable smoke removal equipment are available for use on the subject elevations.

For instrument air - PORVs:

- Redundant cables are separated by a 2-ft-thick reinforced concrete floor at el 121 ft - 0 in. and 139 ft - 0 in.
- Unsealed penetrations in the subject floors have been reviewed
- Train A cables have full suppression coverage on el 100 ft - 0 in.
- Train B cables have full suppression coverage on el 121 ft - 0 in.
- Smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations and portable carbon dioxide extinguishers are available for use on the subject elevations.

For Auxiliary Feedwater:

- The 2-h provided by battery power to the turbine driven auxiliary feedwater UPS is adequate for existing procedures for manual operation to be implemented.

For HVAC - battery room ventilation:

- The requirement for battery and battery charger room ventilation is a long term requirement.
- Either portable ventilation equipment will be installed in the effected room(s) or
- The damaged ventilation system will be repaired within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not exceed acceptable limits.

For steam release (cooldown):

- Manual action can be performed to establish manual control of the atmospheric relief valves by closing the manual air vent valve to bleed off air from the diaphragm of the valve actuator.

For Service Water:

- A long term manual action (greater than 24 h) can be performed to shift the service water discharge from the river and recirc. to the service water pond.

For neutron flux monitoring:

- Configuration of redundant equipment cables and equipment with respect to barriers would limit the fire to one train of equipment.
- Unsealed penetrations in the subject floor slab have been reviewed and will not affect the separation afforded by the concrete floor.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

Previously Approved Engineering Evaluations

For boration/makeup, depressurization, and RCP seal integrity:

- Modification to provide a fire-rated barrier for Train-A raceways ADD1C-, ADD18A, and ADD21A.
- Full suppression coverage is provided in rooms 2163, 2162, 2161, 2160, and 2175
- Cables are separated by 2-ft-thick reinforced concrete except in room 2155 where there is 24 ft of separation with no intervening combustibles.
- Unsealed penetrations in the subject walls have been reviewed.
- A smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations, portable CO, extinguishers, and portable smoke removal equipment are available for use on this elevation.
- Heat collectors have been installed on all sidewall sprinkler heads in room 2161.
- Modification is to provide a fire-rated barrier for the Train-B charging pump room cooler power cable (Raceways BFD02B, BFD03B, and BFD06B) where this cable is in close proximity to redundant Train-A cables.
- Automatic fire suppression system is provided.
- The blockout near Col. 20 which communicates between elevation 100 ft and 121 ft. will be sealed.
- EI 100 ft. and 121 ft - Automatic suppression and detection systems provided for the subject Train-B cables.
- Cables are separated by a 2-ft-thick reinforced concrete slab floor at el 121 ft - 0 in.
- Unsealed penetrations in the floor slab have been reviewed
- Raceways BFD2GD, BFD21B, BHF457, and BHF42 have been provided with a fire barrier in room 2186, to ensure that a source of borated makeup water is available from the RWST and will not require any manual operator action.
- The cabling for LCV115D has been protected by the fire barrier installed in the modification above and will not fail in the closed position.

For Smoke Detection:

- Smoke detection has been added to Room 2342 (spent fuel pool pump room).
- All cabling in this pipe chase (room 2341) is enclosed in conduit.
- The pipe chase has no in situ combustible.
- The pipe chase exits the auxiliary building below grade.
- This transition from room 2608 to room 2341 has a concrete wall with water tight penetrations.
- There is no redundant safe-shutdown cabling in room 2341.
- Low in situ combustible loading and the very low probability of a transient combustible being introduced.

For reactor coolant boundary integrity:

- Manual action can be performed to remove power from all cables in the shared raceway. This can be accomplished by opening the supply breaker on 125 V-dc switchgear 2A for 125 V-dc distribution panel 2C.

To summarize manual actions and licensee commitments:

- Manual operator actions can be performed to regain control of the transfer relays associated with the PORVs and the reactor head vent valves, restoration of the battery room ventilation system, manual control of the TDAFW pump, manual control of one main steam atmospheric relief valve, manual service water valve line up to the service water pond, and the isolation or RCS and pressurizer sampling line isolation valves.
- Licensee has also committed to install heat collectors on the sidewall mounted sprinkler/spray nozzles in room 2161, seal a floor slab blackout on elevation 121 feet - 0 inches and install a raceway fire barrier in the boric acid room 2186.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9925, DCP 03-2-9927, DCP 03-2-9930, and DCP 03-2-9899.

The portion of this exemption that support separation within the fire area are no longer required because the fire risk evaluation, SE-C051326701-008, has

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-004-U1 - Aux Building Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
	<p>found that the fire area is compliant with NFPA 805 Section 4.2.4.</p> <p>A non fire-rated steel hatch exists between rooms 2163 (fire area 2-004) and room 2103 (fire area 2-001). That portion of the exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2151-U1	2151 Waste Gas Decay Tank Rooms	—	E, R, S, N	—	<p>Detection System, 2A-102-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-102-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-102-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-102-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-151/2151-U1-4/U2-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-N-152/2152-U1-4/U2-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2151/151-U2-4/U1-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2152/152-U2-4/U1-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2101/2151-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2102/2151-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2104/2152-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2105/2152-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2107/2165-90/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2108/2166-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2151/2201-4/14-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2151/2202-4/15-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2151/2254-4/12-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2152/2202-4/15-100:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2152/2210-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2165/2211-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2165/2212-4/16-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2166/2211-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2166/2226-4/19-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2153-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2166/2167-4/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2163-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2166/2185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2164/2165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2165/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2166/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation.
2152-U1	2152 Valve Compartment Room	—	—	—	—
2153-U1	2153 Waste Gas Compressor Room	—	E, R, S, N	—	Detection System, 2A-102-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-153/2153-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2153/2203-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2153/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2153-4/4-100:



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2154-U1	2154 Waste Evaporator Steam Generator Room	E	E, R, D, S, N	E, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2153/2154-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2153/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 2A-101-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-101-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-102-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-5:

## Fire Safety Analysis

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 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-8: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-N-154/2154-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-155/2155-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2160/160-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2104/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2105/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2106/2164-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2111/2162-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2154/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2154A/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2154A/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2161/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2163/2213-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2163/2214-4/17-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2210-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2212-4/16-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2213-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2177/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2178/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2178/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2153/2154-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2155/2156-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2158/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2162/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2176/2177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Floor-2161/2208-4/4-121:

## Fire Safety Analysis

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**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2163-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2153/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2156/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2157/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2158/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2161/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2161/2173-4/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2162/2184-4/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2150/2160-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2162/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2167/2164-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2168/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2169/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2172/2161-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2173/2160-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2179/2177-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2179/2178-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-2150/2160-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2164/2165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2154-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2155-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2160-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2161-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2162-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-25-2: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-25-3: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-25-4: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-25-5: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-25-6: -- EEEE/LA: Required to support a fire area boundary evaluation.
2154A-U1	2154A Valve Compartment Room	—	—	—	—
2155-U1	2155 Passageway to Unit 1	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2156-U1	2156 Holdup Tank Room	—	E, R, S, N	—	Detection System, 2A-104-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-156/2156-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2156/156-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2301-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2155/2156-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2156/2157-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2156/2157-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2156/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2156/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2156/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2157-U1	2157 Holdup Tank Room	—	E, R, S, N	—	Detection System, 2A-104-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2157/157-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-157/2157-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2303-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2156/2157-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2158-U1	2158 Holdup Tank Room	—	E, R, S, N	—	<p>FireBarrier, U2-FNP-E-2156/2157-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2157/2161-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2157/2208-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Detection System, 2A-104-3:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2158/158-U2-4/U1-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-158/2158-U1-4/U2-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2158/2304-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2158/2305-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2158/2311-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2159-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2160-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2206-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2158/2161-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2158/2208-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2159-U1	2159 Recycle Evaporator Feed Pump Room	—	E, R, S, N	—	Detection System, 2A-101-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2159/159-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2159/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2159/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2158/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
2160-U1	2160 Hatch Area	—	—	—	FireBarrier, U2-FNP-Ceiling-2140/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2140/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
2161-U1	2161 Corridor	—	—	—	—
2162-U1	2162 Hallway	—	—	—	—
2163-U1	2163 WDS Control Panel Room	—	—	—	—
2164-U1	2164 Storage Room	—	—	—	—
2165-U1	2165 Waste Gas Decay Tank Room	—	—	—	—
2166-U1	2166 Waste Gas Decay Tank Room	—	—	—	—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2168-U1	2168 Chemical Drain Tank Room	—	E, R, S, N	—	Detection System, 2A-25-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2109/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2110/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2168/2224-4/18-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2168/2225-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2167/2168-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2168/2185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2168/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2169/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation.
2170-U1	2170 Letdown Heat Exchanger Room	—	E, R, D, S, N	—	Detection System, 2A-101-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2111/2170-1/5-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2170/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2170/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2170/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2162/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2170/2172-4/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2161/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2162/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2171/2170-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2171/2170-5/4-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2175-U1	2175 Hallway	E	E, R, D	—	-- Barrier: Required to support a fire area boundary evaluation. Detection System, 2A-118-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2175/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2175/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2175/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2173/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2174/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2181/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2175/2186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-118-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2176-U1	2176 Secondary Spent-Resin Storage Tank Room	—	—	—	FireBarrier, U2-FNP-Ceiling-2176/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2176/2177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2176/2180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
2177-U1	2177 Pump Room	—	—	—	—
2178-U1	2178 Filter Room	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2180-U1	2180 Recycle Evaporator Steam Generator Room	—	E, R, S, N	—	<p>Detection System, 2A-101-14:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-101-15:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2180/2230-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2186/2222-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2186/2230-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2186/2237-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2187/2232-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2172/2186-5/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2175/2180-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2186/2188-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2186/OUTSIDE-4/YARD-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2187/OUTSIDE-4/YARD-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2175/2186-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2176/2180-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2179/2187-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2186/CTMT-4/55-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2186/OUTSIDE-4/YARD-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2187/2188-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2179/2180-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2186-U1	2186 Boric Acid Area	—	E, R, D	—	Detection System, 2A-103-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2188/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2188/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2188/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2186/2188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/2609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2187/2188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2188/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2188/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2187-U1	2187 Hydro Test Pump Room	—	—	—	—
2188-U1	2188 Boric Acid Tank Area	—	—	—	—
2203-U1	2203 Waste Condenser Tanks and Pump Room	E	E, R, D, S, N	E, B	Detection System, 2A-103-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-103-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-104-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-104-9:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-35-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-35-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-35-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-35-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-35-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-N-203/2203-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2205/205-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2207/207-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-253/2253-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2140/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2140/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2150/2207-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2153/2203-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2154A/2209-4/4-121:

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### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2159/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2170/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2172/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2173/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2174/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2175/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2175/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2178/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2203/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2203/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2205/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2207/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2208/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2312-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2215/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2222/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2237/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2203/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2204/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2206/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2206/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2207/OUTSIDE-4/YARD-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2604-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2209/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2214/2209-17/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2217/2218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2218/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2237/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2245/2209-20/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-CHASE2/2203-51/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Floor-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2156/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2157/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2158/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2204/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2206/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-2208/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2209/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2209/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2218/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/2239-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2206/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2156/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2188/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2202/2203-15/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2209/2210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2222/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2222/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2237/CTMT-4/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2601/2207-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2208-93/4-131:

## Fire Safety Analysis

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<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2204-U1	2204 Waste Evaporator Package Room	—	E, R, S, N	—	<p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2208-4/4-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2207-S08/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2205-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2207-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2209-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-35-1:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-35-2:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 2A-104-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-204/2204-U1-4/U2-4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2153/2204-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2154/2204-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2154A/2204-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2204-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2204/2317-4/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2203/2204-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2204/2205-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2204/2209-4/4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>
2205-U1	2205 Passageway to Unit 1	—	—	—	—

## Fire Safety Analysis

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Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2206-U1	2206 Heat Exchanger Room	—	E, R, S, N	—	Detection System, 2A-104-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2206/206-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2159/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2158/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2206/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2206/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2206/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2206/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2207-U1	2207 Hatch Area	—	—	—	—
2208-U1	2208 Corridor	—	—	—	—
2209-U1	2209 Hallway	—	—	—	—
2215-U1	2215 Duct and Pipe Chase	—	—	—	FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2215/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2214/2215-17/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2215/STAIR 2-4/S02-121:

## Fire Safety Analysis

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Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2402/2215-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2215-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2215-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2215/2318-4/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2215/471-4/44-155: -- Barrier: Required to support a fire area boundary evaluation. 
2216-U1	2216 Valve Compartments Area	—	E, R, D	—	Detection System, 2A-103-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2170/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2171/2216-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2183/2216-1/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2216/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2209/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2216/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2216/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2209/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. 

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
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### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2217-U1	2217 Volume Control Tank Room	—	E, R, S, N	—	Detection System, 2A-103-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2170/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2171/2217-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2217/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2216/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2217/2218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2217/2223-9/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2217/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2217/2223-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2218-U1	2218 Chiller Unit Room	—	—	—	—
2219-U1	2219 Pipe Chase	—	—	—	FireBarrier, U2-FNP-Ceiling-2178/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2219/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2219-93/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2220-U1	2220 Valve Compartment Room	—	E, R, S, N	—	Detection System, 2A-103-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2177/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2179/2220-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2220/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2220/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2221-U1	2221 Primary Spent-Resin Storage Tank Room	—	—	—	FireBarrier, U2-FNP-Ceiling-2176/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2221/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2221/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2221/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2220/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2222-U1	2222 Corridor	R	—	—	Water Suppression, WS-2A-35-3: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2230-U1	2230 Recycle Evaporator Package Room	—	E, R, S, N	—	Detection System, 2A-103-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2175/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2180/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2221/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2222/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2231-U1	2231 Sluice Pump Room	—	E, R, S, N	—	Detection System, 2A-103-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2179/2231-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2231/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2231/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2220/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2231/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2232-U1	2232 Sluice Filter Room	—	E, R, D	—	FireBarrier, U2-FNP-W-2208/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 2A-103-8: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2187/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2231/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2231/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2188/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.
2237-U1	2237 Corridor	—	—	—	—
2238-U1	2238 Cask Storage Area	—	E, R, S, N	—	Detection System, 2A-107-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-107-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-E-2237/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2239/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2240/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2238-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2349-4/39-139:



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/2239-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2447/2348-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2448-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2238/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2459/2240-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2459/2348-39/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2239-U1	2239 Transfer Canal	—	—	—	—
2240-U1	2240 Spent-Fuel Pool Room	—	—	—	—
2253-U1	2253 Valve Compartment	—	—	—	—
2301-U1	2301 Seal Water Filter Room	—	E, R, D, S, N	—	Detection System, 2A-105-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-18: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, 2A-105-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-302/2302-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-303/2303-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-304/2304-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-305/2305-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2301/301-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2301-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2303-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2158/2304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2158/2305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2158/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2301/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2302/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2303/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2304/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2305/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2311/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2313/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2314/2404-4/97-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2315/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2305/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2311/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2313/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2301/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2307/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2315/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2302-U1	2302 Recycle Evaporator Feed Filter Room	—	—	—	—
2303-U1	2303 Reactor Coolant Filter Room	—	—	—	—
2304-U1	2304 Waste Monitor	—	—	—	—
2305-U1	2305 Seal Injection Filter Room	—	—	—	—
2306-U1	2306 Recycle Evaporator Feed Demineralizer Room	—	—	—	FireBarrier, U0-FNP-N-306/2306-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2306/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2305/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2306/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2306/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2307-U1	2307 Valve Compartment Room	E	E, R, D, S, N	E, B	Detection System, 2A-105-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-48-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-48-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-48-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-48-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-48-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2A-48-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-48-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Detection System, 2A-49-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-316/2316-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-309/2309-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2188/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2205/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2207/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2312-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2221/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2222/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2237/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2253/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2307/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2309/2406-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2310/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2312/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2316/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2327/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2332/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2332/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2308/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2309/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2317/2316-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2322/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2324/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2326/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2327/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2330/2609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2351-4/4-139:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2238-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2347/2332-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2403/2316-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2306/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2307/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2308/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2309/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2311/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2313/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2317/2322-34/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2322/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2332/CTMT-4/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2322-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-S-2312/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2330/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2342/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2347/2325-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2301/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2307/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2315/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2342/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2601/2309-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2312-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2309-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2312-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2316-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2322-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-48-1:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2308-U1	2308 Waste Condensate and Monitor Tank Demineralizer Room	—	—	—	-- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-48-2: -- EEEE/LA: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-308/2308-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2308/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2306/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2308/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2308/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2309-U1	2309 Hatch Area	—	—	—	FireBarrier, U2-FNP-E-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2307/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2310-U1	2310 Valve Compartment Room	—	—	—	FireBarrier, U2-FNP-E-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2311-U1	2311 Recycle Evaporator Concentrates Filter Room	—	—	—	—
2312-U1	2312 Corridor	—	—	—	FireBarrier, U2-FNP-N-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2313-U1	2313 Floor Drain and Laundry Tank Filter Room	—	—	—	—
2314-U1	2314 Waste Evaporator Feed Filter Room	—	—	—	—
2315-U1	2315 Recycle Waste Condenser Filter Room	—	—	—	—
2316-U1	2316 Passageway to Unit 1	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2321-U1	2321 Sample Panel Room	—	E, R, S, N	—	Detection System, 2A-49-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2216/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2321/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2321/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2321/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2321/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2322-U1	2322 Hallway	—	—	—	—
2323-U1	2323 Sample Room	—	E, R, S, N	—	Detection System, 2A-49-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2209/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2322/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2323/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2321/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2324-U1	2324 Primary Chemistry Lab	—	E, R, S, N	—	Detection System, 2A-49-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2203/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2217/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2324/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2324/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2321/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2324/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2333/2324-35/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2325-U1	2325 Counting Room/Spectro-photometer Lab	—	—	—	—
2326-U1	2326 Clean Storage Room	—	E, R, S, N	—	Detection System, 2A-49-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2218/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2326/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2326/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2347/2326-35/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2327-U1	2327 Valve Access Area	—	—	—	FireBarrier, U2-FNP-N-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2327/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2328-U1	2328 BTR Demineralizer Room	—	—	—	FireBarrier, U2-FNP-Ceiling-2208/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2328/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/2328-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2328/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2328-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2328-93/4-131: -- Barrier: Required to support a fire area boundary evaluation.
2329-U1	2329 Pipe Tunnel	—	—	—	FireBarrier, U2-FNP-E-2329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2328/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2329/2604-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2329/2602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2329/2603-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2605/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2329-S10/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2330-U1	2330 Chiller Surge Tanks Pump Room	—	—	—	FireBarrier, U2-FNP-CEILING-2330/2420-4/92-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2331-U1	2331 Valve Access Area	—	E, R, S, N	—	Detection System, 2A-48-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2188/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2231/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2331-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2331/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2332-U1	2332 MCC 1A/2A Area	—	—	—	FireBarrier, U2-FNP-W-2327/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2340-U1	2340 Demineralizer Compartment	—	—	—	FireBarrier, U2-FNP-Ceiling-2221/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2340/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2340/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2340/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2327/2340-4/4-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2341-U1	2341 Pipe Chase	—	—	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2331/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/2341-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation.
2342-U1	2342 Spent-Fuel Pool Pump Room	—	E, R, S, N	—	Detection System, 2A-48-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2188/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2342/2445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2342/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2342/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2342/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2342/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2348-U1	2348 Cask Wash Area	—	—	—	—
2351-U1	2351 Chiller Pump and Surge Tank Room	—	—	—	—
2402-U1	2402 Passage to Unit 1	—	E, R, D	—	Detection System, 2A-57-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2402/402-U2-4/U1-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-2402/471-U2-4/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2402-34/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2403-U1	2403 Respirator Issue Room/Combustible Storage Room	—	E, R, S, N	—	<p>FireBarrier, U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2402/2409-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2402/2410A-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2402/2215-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2403/2402-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Detection System, 2A-112-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-403/2403-U1-4/U2-4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2316/2403-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2317/2403-34/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2403/2316-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2410A/2403-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2403/2317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2403/2409-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2410A/2403-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2403/2317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2403/2402-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2404/2403-97/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2405-U1	2405 Hatch Room	E	E, R, D, S, N	E, D, B	<p>Detection System, 2A-107-15:            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-107-6:            -- DID: Required to meet DID criteria.            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-107-7:            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-107-9:            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-57-2:            -- DID: Required to meet DID criteria.            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-57-3:            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-75-1:            -- DID: Required to meet DID criteria.            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-75-2:            -- DID: Required to meet DID criteria.            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.            -- Separation: Required to meet Separation criteria.            -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-75-3:            -- EEEE/LA: Required to support an Engineering Evaluation.            -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-E-2406/406-U2-4/U1-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-405/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-406/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-407/2408-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-441/2406-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-407/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2306/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2307/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2308/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2309/2406-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2310/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2312/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2409-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2321/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2324/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2327/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2328/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2332/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2334/2409-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2340/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2602/2405-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2603/2408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2606/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2402/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2404/2405-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2421/2422-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2423/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2445/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2447/2446-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2403/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2404/2409-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2408/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2409/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2422/2466-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2427/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2418/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2420/2405-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2421/2405-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2446/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2459/2446-39/4-155:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2418/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2420/2419-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2423/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2419-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2405-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2406-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2408-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2409-Restricted transient controls: -- DID: Required to meet DID criteria. Restricted transient controls, U2-4-AUX BUILDING-2422-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-75-1: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-75-2: -- EEEE/LA: Required to support a fire area boundary evaluation.
2406-U1	2406 Tool Room	—	—	—	—
2408-U1	2408 Hallway	—	—	—	—
2409-U1	2409 Hallway	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2410A-U1	2410A 600-V Load Center	—	E, R, S, N	—	Detection System, 2A-57-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2317/2410A-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2402/2410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2410A/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2410A/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2418-U1	2418 Auxiliary Building and Containment Purge Vent Equipment Room	—	E, R, S, N	—	Detection System, 2A-107-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2324/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2326/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2333/2418-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2347/2418-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2418/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2418/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2418/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2419-U1	2419 Demineralizer Hatch Area	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2422-U1	2422 Corridor	—	—	—	—
2423-U1	2423 Valve Compartment	—	—	—	—
2424-U1	2424 Demineralizer Compartments	—	—	—	FireBarrier, U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2424/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2425-U1	2425 Demineralizer Compartments	—	—	—	FireBarrier, U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2607/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2424/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2425/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2426-U1	2426 Demineralizer Compartments	—	—	—	FireBarrier, U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2425/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2426/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2427-U1	2427 Demineralizer Compartments	—	—	—	FireBarrier, U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2426/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2427/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2429-U1	2429 Containment Purge Air Equipment Room	—	E, R, D, S, N	E, D, B	Detection System, 2A-108-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-E-471/2429-U0-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2334/2429-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2429-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2429/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2452/2429-43/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2429/2241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2431-U1	2431 Duct/Pipe Chase	—	—	—	FireBarrier, U2-FNP-W-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2429-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
2445-U1	2445 Spent-Fuel Pool Heat Exchanger Room	—	E, R, S, N	—	Detection System, 2A-107-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2A-107-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2342/2445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2445/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2448-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2202-20/15-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2447/2445-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2447/2448-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2448/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2446-U1	2446 Hallway	—	—	—	—
2448-U1	2448 SFPC Pump Room	—	—	—	—
2449-U1	2449 Demineralizer Room	—	—	—	FireBarrier, U2-FNP-Ceiling-2342/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2448/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2450/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2450-U1	2450 Valve Compartment	—	—	—	—
2451-U1	2451 Filter Room	—	—	—	FireBarrier, U2-FNP-Ceiling-2342/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2450/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2451/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2467-U1	2467 SFP Heat Exchanger Room	—	—	—	FireBarrier, U2-FNP-N-2408/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2446/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2423/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2467/2421-4/92-165: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2478-U1	2478 Motor Control Center Room	—	E, R, S, N	—	Detection System, 2A-107-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2332/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2478/2420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2478/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/2478-DU-ABVB-A/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/2478-DU-ABVB-B/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2238/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2451/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2478/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation.
2504-U1	2504 Stair No. 6, Floor El. 184'-0"	—	E, R	—	Detection System, 2A-109-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2459/2504-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2505-U1	2505 Spent-Fuel Pool Vent Equipment Room	—	E, R	—	Detection System, 2A-109-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2459/2505-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.
2604-U1	2604 Passage	—	E, R, D, S, N	E, B	Detection System, 2A-105-11: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-12: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Detection System, 2A-105-17: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2604/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2605/2420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2605/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2606/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2607/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2609/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/2609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2604-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2330/2609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2606/2607-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/2341-4/4-131: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U1 - Aux Building  
**Compliance Basis:** Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2610/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2606-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2610-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2329/2604-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2602/2604-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2603/2604-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2604/2605-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2604/2610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2605/2609-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2606/2608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2607/2608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2605/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2606/2610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2607/2610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2604-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2208-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2608/2609-4/4-131:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 1: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 2: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2605-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2609-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2604-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2605-U1	2605 Blowdown Pumps and Surge Tank Room	—	—	—	—
2606-U1	2606 Filter Room	—	—	—	—
2607-U1	2607 Filter Room	—	—	—	—
2608-U1	2608 Blowdown Heat Exchanger Room	—	—	—	—
2609-U1	2609 Storage Room	—	—	—	—
2610-U1	2610 Valve Compartment Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2151-U2	2151 Waste Gas Decay Tank Rooms	
2152-U2	2152 Valve Compartment Room	
2153-U2	2153 Waste Gas Compressor Room	
2154-U2	2154 Waste Evaporator Steam Generator Room	
2154A-U2	2154A Valve Compartment Room	
2155-U2	2155 Passageway to Unit 1	
2156-U2	2156 Holdup Tank Room	
2157-U2	2157 Holdup Tank Room	
2158-U2	2158 Holdup Tank Room	
2159-U2	2159 Recycle Evaporator Feed Pump Room	
2160-U2	2160 Hatch Area	
2161-U2	2161 Corridor	
2162-U2	2162 Hallway	
2163-U2	2163 WDS Control Panel Room	
2164-U2	2164 Storage Room	
2165-U2	2165 Waste Gas Decay Tank Room	
2166-U2	2166 Waste Gas Decay Tank Room	
2168-U2	2168 Chemical Drain Tank Room	
2170-U2	2170 Letdown Heat Exchanger Room	
2175-U2	2175 Hallway	
2176-U2	2176 Secondary Spent-Resin Storage Tank Room	
2177-U2	2177 Pump Room	
2178-U2	2178 Filter Room	
2180-U2	2180 Recycle Evaporator Steam Generator Room	
2186-U2	2186 Boric Acid Area	
2187-U2	2187 Hydro Test Pump Room	
2188-U2	2188 Boric Acid Tank Area	
2203-U2	2203 Waste Condenser Tanks and Pump Room	
2204-U2	2204 Waste Evaporator Package Room	
2205-U2	2205 Passageway to Unit 1	
2206-U2	2206 Heat Exchanger Room	
2207-U2	2207 Hatch Area	
2208-U2	2208 Corridor	
2209-U2	2209 Hallway	
2215-U2	2215 Duct and Pipe Chase	
2216-U2	2216 Valve Compartments Area	
2217-U2	2217 Volume Control Tank Room	
2218-U2	2218 Chiller Unit Room	
2219-U2	2219 Pipe Chase	
2220-U2	2220 Valve Compartment Room	



## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2221-U2	2221 Primary Spent-Resin Storage Tank Room	
2222-U2	2222 Corridor	
2230-U2	2230 Recycle Evaporator Package Room	
2231-U2	2231 Sluice Pump Room	
2232-U2	2232 Sluice Filter Room	
2237-U2	2237 Corridor	
2238-U2	2238 Cask Storage Area	
2239-U2	2239 Transfer Canal	
2240-U2	2240 Spent-Fuel Pool Room	
2253-U2	2253 Valve Compartment	
2301-U2	2301 Seal Water Filter Room	
2302-U2	2302 Recycle Evaporator Feed Filter Room	
2303-U2	2303 Reactor Coolant Filter Room	
2304-U2	2304 Waste Monitor	
2305-U2	2305 Seal Injection Filter Room	
2306-U2	2306 Recycle Evaporator Feed Demineralizer Room	
2307-U2	2307 Valve Compartment Room	
2308-U2	2308 Waste Condensate and Monitor Tank Demineralizer Room	
2309-U2	2309 Hatch Area	
2310-U2	2310 Valve Compartment Room	
2311-U2	2311 Recycle Evaporator Concentrates Filter Room	
2312-U2	2312 Corridor	
2313-U2	2313 Floor Drain and Laundry Tank Filter Room	
2314-U2	2314 Waste Evaporator Feed Filter Room	
2315-U2	2315 Recycle Waste Condenser Filter Room	
2316-U2	2316 Passageway to Unit 1	
2321-U2	2321 Sample Panel Room	
2322-U2	2322 Hallway	
2323-U2	2323 Sample Room	
2324-U2	2324 Primary Chemistry Lab	
2325-U2	2325 Counting Room/Spectro-photometer Lab	
2326-U2	2326 Clean Storage Room	
2327-U2	2327 Valve Access Area	
2328-U2	2328 BTR Demineralizer Room	
2329-U2	2329 Pipe Tunnel	
2330-U2	2330 Chiller Surge Tanks Pump Room	
2331-U2	2331 Valve Access Area	
2332-U2	2332 MCC 1A/2A Area	
2340-U2	2340 Demineralizer Compartment	
2341-U2	2341 Pipe Chase	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2342-U2	2342 Spent-Fuel Pool Pump Room	
2348-U2	2348 Cask Wash Area	
2351-U2	2351 Chiller Pump and Surge Tank Room	
2402-U2	2402 Passage to Unit 1	
2403-U2	2403 Respirator Issue Room/Combustible Storage Room	
2405-U2	2405 Hatch Room	
2406-U2	2406 Tool Room	
2408-U2	2408 Hallway	
2409-U2	2409 Hallway	
2410A-U2	2410A 600-V Load Center	
2418-U2	2418 Auxiliary Building and Containment Purge Vent Equipment Room	
2419-U2	2419 Demineralizer Hatch Area	
2422-U2	2422 Corridor	
2423-U2	2423 Valve Compartment	
2424-U2	2424 Demineralizer Compartments	
2425-U2	2425 Demineralizer Compartments	
2426-U2	2426 Demineralizer Compartments	
2427-U2	2427 Demineralizer Compartments	
2429-U2	2429 Containment Purge Air Equipment Room	
2431-U2	2431 Duct/Pipe Chase	
2445-U2	2445 Spent-Fuel Pool Heat Exchanger Room	
2446-U2	2446 Hallway	
2448-U2	2448 SFPC Pump Room	
2449-U2	2449 Demineralizer Room	
2450-U2	2450 Valve Compartment	
2451-U2	2451 Filter Room	
2467-U2	2467 SFP Heat Exchanger Room	
2478-U2	2478 Motor Control Center Room	
2504-U2	2504 Stair No. 6, Floor El. 184'-0"	
2505-U2	2505 Spent-Fuel Pool Vent Equipment Room	
2604-U2	2604 Passage	
2605-U2	2605 Blowdown Pumps and Surge Tank Room	
2606-U2	2606 Filter Room	
2607-U2	2607 Filter Room	
2608-U2	2608 Blowdown Heat Exchanger Room	
2609-U2	2609 Storage Room	
2610-U2	2610 Valve Compartment Room	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2151-U2 - 2151 Waste Gas Decay Tank Rooms

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-1	U2-4 Detection System 2A-102-1 Room 2151	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-2	U2-4 Detection System 2A-102-2 Room 2152	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-5	U2-4 Detection System 2A-102-5 Room 2165	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-6	U2-4 Detection System 2A-102-6 Room 2166	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-151/2151-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-152/2152-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2151/151-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2152/152-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2101/2151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2102/2151-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2104/2152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2105/2152-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2107/2165-90/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2108/2166-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2201-4/14-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2202-4/15-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2254-4/12-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2152/2202-4/15-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2152/2210-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2211-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2212-4/16-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2166/2211-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2166/2226-4/19-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2151-U2 - 2151 Waste Gas Decay Tank Rooms	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2151/2153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2151/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2166/2167-4/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2163-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2166/2185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2164/2165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2107/2165-90/4-100: 2-083-111-05	0:00, F. of 2165	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2212-4/16-100: 2-121-115-16	0:00, F. of 2244	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2152-U2 - 2152 Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2153-U2 - 2153 Waste Gas Compressor Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-3	U2-4 Detection System 2A-102-3 Room 2153	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-153/2153-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2151/2153-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2153/2154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2153/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2154-U2 - 2154 Waste Evaporator Steam Generator Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D109	Hose Station - N2V43D109-FZ 4 Room 2163	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D110	Hose Station - N2V43D110-FZ 4 Room 2161	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-7	U2-4 Detection System 2A-101-7 Room 2177	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-101-8	U2-4 Detection System 2A-101-8 Room 2178	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-102-4	U2-4 Detection System 2A-102-4 Room 2154	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-1	U2-4 Detection System 2A-25-1 Room 2160	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-2	U2-4 Detection System 2A-25-2 Room 2161	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-3	U2-4 Detection System 2A-25-3 Room 2162	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-4	U2-4 Detection System 2A-25-4 Room 2163	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-5	U2-4 Detection System 2A-25-5 Room 2164	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2154-U2 - 2154 Waste Evaporator Steam Generator Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-25-7	U2-4 Detection System 2A-25-7 Room 2154A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-25-8	U2-4 Detection System 2A-25-8 Room 2155	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-25-2	Preaction Sprinkler System, U2-4, Passageway to Unit 1, Room 2155	-	Yes		Yes	-
WS-2A-25-3	Preaction Sprinkler System, U2-4, Hatch Area, Room 2160	-	Yes		Yes	-
WS-2A-25-4	Preaction Sprinkler System, U2-4, Corridor, Room 2161	-	Yes		Yes	-
WS-2A-25-5	Preaction Sprinkler System, U2-4, Hallway, Room 2162	-	Yes		Yes	-
WS-2A-25-6	Preaction Sprinkler System, U2-4, WDS Control Panel Room, Room 2163	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-154/2154-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-155/2155-U1-4/U2-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2104/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2105/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2106/2164-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2111/2162-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2154/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2215-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2163/2213-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2163/2214-4/17-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2210-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2212-4/16-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2154-U2 - 2154 Waste Evaporator Steam Generator Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2164/2213-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2177/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2178/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2178/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2151/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2153/2154-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2155/2156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2176/2177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Floor-2161/2208-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2163-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2153/2154A-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2160/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2161/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2161/2173-4/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2162/2184-4/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2160-S08/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2150/2160-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2167/2164-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2168/2163-1/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2169/2163-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2172/2161-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2173/2160-5/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2179/2177-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2178-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2150/2160-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/2164-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2164/2165-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2160-S08/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2154-U2 - 2154 Waste Evaporator Steam Generator Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2168/2163-1/4-100: 2-100-113-04	0:00, N. of 2163	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2177-96/4-100: 2-100-114-03	0:00, N. of 2177	-	-	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2178-96/4-100: 2-100-114-04	0:00, N. of 2178	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-155/2155-U1-4/U2-4-100 150	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 152	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2160/160-U2-4/U1-4-100 153	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2150/2160-89/4-100 2185	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2172/2161-5/4-100 2155	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2162-S02/4-100 2159	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2160-S08/4-100 2154	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2154-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2155-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2160-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2161-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2162-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2154A-U2 - 2154A Valve Compartment Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2155-U2 - 2155 Passageway to Unit 1	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2156-U2 - 2156 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-1	U2-4 Detection System 2A-104-1 Room 2156	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-156/2156-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2156/156-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2155/2156-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2156/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2157-U2 - 2157 Holdup Tank Room	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-2	U2-4 Detection System 2A-104-2 Room 2157	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2157/157-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-157/2157-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2156/2157-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2158-U2 - 2158 Holdup Tank Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-3	U2-4 Detection System 2A-104-3 Room 2158	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2158/158-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-158/2158-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2157/2158-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2161-4/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2159-U2 - 2159 Recycle Evaporator Feed Pump Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-1	U2-4 Detection System 2A-101-1 Room 2159	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2159/159-U2-4/U1-4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2159/2160-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2160-U2 - 2160 Hatch Area

### Systems and Features

#### Extinguishers

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#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2140/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2140/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2140/2159-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2161-U2 - 2161 Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A77	Aux.Bldg.-100'-South Corridor West End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A78	Aux.Bldg.-100'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A79	Aux.Bldg.-100'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2162-U2 - 2162 Hallway	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2163-U2 - 2163 WDS Control Panel Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2164-U2 - 2164 Storage Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2165-U2 - 2165 Waste Gas Decay Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2166-U2 - 2166 Waste Gas Decay Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2168-U2 - 2168 Chemical Drain Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-25-6	U2-4 Detection System 2A-25-6 Room 2168	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2109/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2110/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2168/2224-4/18-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2168/2225-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2167/2168-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2168/2185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2168/2163-1/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2169/2168-1/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2168/2163-1/4-100: 2-100-113-04	0:00, N. of 2163	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2169/2168-1/4-100: 2-100-113-03	0:00, E. of 2168	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2168-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2170-U2 - 2170 Letdown Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-2	U2-4 Detection System 2A-101-2 Room 2170	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2111/2170-1/5-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2170/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2170/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2170/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2170/2172-4/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2161/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2162/2170-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2171/2170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2171/2170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2171/2170-5/4-100 2163	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2170-U2 - 2170 Letdown Heat Exchanger Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2175-U2 - 2175 Hallway	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-118-1	U2-4 Detection System 2A-118-1 Room 2175	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-118-1	Preaction Sprinkler System, U2-4, Southeast Corridor, Room 2175	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2175/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2175/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2175/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2173/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2174/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2175/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2175/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2181/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2175/2186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2160/2175-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2175-U2 - 2175 Hallway	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2176-U2 - 2176 Secondary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2176/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2175/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2176/2177-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2160/2176-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2176/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2177-U2 - 2177 Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2178-U2 - 2178 Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2180-U2 - 2180 Recycle Evaporator Steam Generator Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D131	Hose Station - N2V43D131-FZ 4 Room 2186	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-10	U2-4 Detection System 2A-101-10 Room 2180	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-101-14	U2-4 Detection System 2A-101-14 Room 2186	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-101-15	U2-4 Detection System 2A-101-15 Room 2187	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2180/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2187/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2172/2186-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2175/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2175/2186-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2176/2180-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2179/2187-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/CTMT-4/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2187/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2179/2180-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2180-U2 - 2180 Recycle Evaporator Steam Generator Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2179/2187-96/4-100: 2-100-114-01	0:00, S. of 2187	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2179/2180-96/4-100: 2-100-114-02	0:00, W. of 2179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2179/2180-96/4-100 2184	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2186-U2 - 2186 Boric Acid Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-1	U2-4 Detection System 2A-103-1 Room 2188	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2188/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2188/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2188/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/2609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2187/2188-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2188/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2188/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2187-U2 - 2187 Hydro Test Pump Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2188-U2 - 2188 Boric Acid Tank Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2203-U2 - 2203 Waste Condenser Tanks and Pump Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D104	Hose Station - N2V43D104-FZ 4 Room 2209	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D128	Hose Station - N2V43D128-FZ 4 Room 2208	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D132	Hose Station - N2V43D132-FZ 4 Room 2237	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-4	U2-4 Detection System 2A-103-4 Room 2218	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-103-9	U2-4 Detection System 2A-103-9 Room 2237	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-104-4	U2-4 Detection System 2A-104-4 Room 2203	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-104-9	U2-4 Detection System 2A-104-9 Room 2253	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-1	U2-4 Detection System 2A-35-1 Room 2207	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-2	U2-4 Detection System 2A-35-2 Room 2208	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-3	U2-4 Detection System 2A-35-3 Room 2209	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-4	U2-4 Detection System 2A-35-4 Room 2222	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-35-5	U2-4 Detection System 2A-35-5 Room 2205	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2203-U2 - 2203 Waste Condenser Tanks and Pump Room

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-35-1	Preaction Sprinkler System, U2-4, Hatch Area, Room 2207	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-35-2	Preaction Sprinkler System, U2-4, Hallway, Room 2209	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-203/2203-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2205/205-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-253/2253-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2140/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2140/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2150/2207-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2203-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2170/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2172/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2173/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2174/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2175/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2175/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2178/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2203/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2203/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2205/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2207/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/STAIR 8-4/S08-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2312-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2209/2322-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2203-U2 - 2203 Waste Condenser Tanks and Pump Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2209/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2215/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2222/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2237/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2203/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2204/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2604-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2209-17/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2218/2222-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2237/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2245/2209-20/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2203-51/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Floor-2161/2208-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2156/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2157/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2158/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2204/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2206/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2218/2223-4/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/2239-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2156/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2203-U2 - 2203 Waste Condenser Tanks and Pump Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2188/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2202/2203-15/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2209/2210-4/20-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 2209/2210 and fire areas 4/20	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2237/CTMT-4/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2601/2207-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2208-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2605/2208-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2150/2207-89/4-100: 2-100-114-05	0:00, C. of 2150	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2150/2207-89/4-100: 2-100-114-06	0:00, C. of 2150	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2218/2222-4/4-121: 2-121-117-05	0:00, E. of 2222	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2245/2209-20/4-131: 2-131-115-01	0:00, E. of 2245	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2205/205-U2-4/U1-4-121 202	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2207/207-U2-4/U1-4-121 203	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121 204	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2209-S02/4-121 2212	0:00,	-	Yes		Yes	-
U2-FNP-W-STAIR 8/2207-S08/4-121 2205	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2205-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2207-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2209-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2204-U2 - 2204 Waste Evaporator Package Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-5	U2-4 Detection System 2A-104-5 Room 2204	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-204/2204-U1-4/U2-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2153/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2154A/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2161/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2204/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2203/2204-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2204/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2204/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2205-U2 - 2205 Passageway to Unit 1	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2206-U2 - 2206 Heat Exchanger Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-6	U2-4 Detection System 2A-104-6 Room 2206	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2206/206-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2159/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2160/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2158/2206-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2207-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2206/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2206/2253-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2207-U2 - 2207 Hatch Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2208-U2 - 2208 Corridor

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A72	Aux.Bldg.-121'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A73	Aux.Bldg.-121'-South Corridor East End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2209-U2 - 2209 Hallway

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2215-U2 - 2215 Duct and Pipe Chase

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2162/2215-4/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2162/2215-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2215/2205-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2215-17/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2215/STAIR 2-4/S02-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2402/2215-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2209-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2215-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2215-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/2318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/471-4/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2214/2215-17/4-121: 2-121-115-19	0:00, E. of 2214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2317-4/34-139: 2-139-118-01	0:00, N. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2215-U2 - 2215 Duct and Pipe Chase	

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2216-U2 - 2216 Valve Compartments Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-2	U2-4 Detection System 2A-103-2 Room 2216	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2170/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2171/2216-5/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2183/2216-1/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2216/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2223-4/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2209/2216-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2217-U2 - 2217 Volume Control Tank Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-3	U2-4 Detection System 2A-103-3 Room 2217	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2170/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2171/2217-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2217/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2216/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2218-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2217/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2217-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2217/2223-4/1-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2217/2223-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2218-U2 - 2218 Chiller Unit Room	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2219-U2 - 2219 Pipe Chase	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2178/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2219/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2208/2219-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2219-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2220-U2 - 2220 Valve Compartment Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-5	U2-4 Detection System 2A-103-5 Room 2220	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2177/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2179/2220-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/STAIR 8-4/S08-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2220/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2220-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2220/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2221-U2 - 2221 Primary Spent-Resin Storage Tank Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2176/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2221/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2221/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2221/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2220/2221-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2222-U2 - 2222 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A74	Aux.Bldg.-121'-East Corridor North End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-35-3	Preaction Sprinkler System, U2-4, Corridor, Room 2222	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

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### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2230-U2 - 2230 Recycle Evaporator Package Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-6	U2-4 Detection System 2A-103-6 Room 2230	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2175/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2180/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2186/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2221/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2230/2237-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2222/2230-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2231-U2 - 2231 Sluice Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-7	U2-4 Detection System 2A-103-7 Room 2231	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2179/2231-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2231/2231-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2231/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2220/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2231/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2208/2231-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2231/2208-4/4-121 2228	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2232-U2 - 2232 Sluice Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-103-8	U2-4 Detection System 2A-103-8 Room 2232	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2187/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2230/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2231/2208-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2208/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2231/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2188/2232-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2231/2208-4/4-121 2228	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2237-U2 - 2237 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2238-U2 - 2238 Cask Storage Area

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-1	U2-4 Detection System 2A-107-1 Room 2238	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-3	U2-4 Detection System 2A-107-3 Room 2240	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2237/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2239/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2238-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/2238-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/2239-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2447/2348-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2448-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2238/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2238-U2 - 2238 Cask Storage Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2348-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2459/2240-39/4-155: 2-155-106-01	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155: 2-155-106-02	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155: 2-155-106-03	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2348-39/4-155: 2-155-106-04	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2447/2348-98/4-155 2434	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2239-U2 - 2239 Transfer Canal	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2240-U2 - 2240 Spent-Fuel Pool Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2253-U2 - 2253 Valve Compartment	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2301-U2 - 2301 Seal Water Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-105-1	U2-4 Detection System 2A-105-1 Room 2301	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-10	U2-4 Detection System 2A-105-10 Room 2315	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-18	U2-4 Detection System 2A-105-18 Room 2303	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-105-2	U2-4 Detection System 2A-105-2 Room 2302	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-3	U2-4 Detection System 2A-105-3 Room 2304	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-4	U2-4 Detection System 2A-105-4 Room 2305	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-7	U2-4 Detection System 2A-105-7 Room 2311	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-8	U2-4 Detection System 2A-105-8 Room 2313	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-9	U2-4 Detection System 2A-105-9 Room 2314	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2301-U2 - 2301 Seal Water Filter Room

**Systems and Features**

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-302/2302-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-303/2303-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-304/2304-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-305/2305-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2301/301-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2301-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2302-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2156/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2303-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2157/2313-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2304-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2305-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2158/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2301/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2302/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2303/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2304/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2305/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2311/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2313/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2314/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2315/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2305/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2311/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2313/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2301/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2307/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2315/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2301-U2 - 2301 Seal Water Filter Room	

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2302-U2 - 2302 Recycle Evaporator Feed Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2303-U2 - 2303 Reactor Coolant Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2304-U2 - 2304 Waste Monitor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2305-U2 - 2305 Seal Injection Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2306-U2 - 2306 Recycle Evaporator Feed Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-306/2306-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2306/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2305/2306-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2306/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2306/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2307-U2 - 2307 Valve Compartment Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D111	Hose Station - N2V43D111-FZ 4 Room 2316	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D113	Hose Station - N2V43D113-FZ 4 Room 2332	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D114	Hose Station - N2V43D114-FZ 4 Room 2312	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-105-5	U2-4 Detection System 2A-105-5 Room 2307	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-6	U2-4 Detection System 2A-105-6 Room 2310	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-1	U2-4 Detection System 2A-48-1 Room 2309	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-2	U2-4 Detection System 2A-48-2 Room 2312	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-3	U2-4 Detection System 2A-48-3 Room 2316	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-5	U2-4 Detection System 2A-48-5 Room 2322	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-6	U2-4 Detection System 2A-48-6 Room 2327	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-7	U2-4 Detection System 2A-48-7 Room 2330	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-48-9	U2-4 Detection System 2A-48-9 Room 2332	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2307-U2 - 2307 Valve Compartment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-4	U2-4 Detection System 2A-49-4 Room 2325	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-48-1	Preaction Sprinkler System, U2-4, Passageway to Unit 1, Room 2316	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-48-2	Preaction Sprinkler System, U2-4, Hallway, Room 2322	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2188/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2205/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2206/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2207/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2312-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2209/2322-4/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2221/2327-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2222/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2237/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2307/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2309/2406-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2310/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2312/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2316/2403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2327/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2332/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2332/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2322-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2307-U2 - 2307 Valve Compartment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2308/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2309/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2317/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2322/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2324/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2326/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2327/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2330/2609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2238-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2347/2332-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2403/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2306/2307-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2307/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2308/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2309/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2311/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2313/2312-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2317/2322-34/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2322/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2332/CTMT-4/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2322-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2314-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2312/2315-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2330/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2342/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2347/2325-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2301/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2307/2311-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2315/2316-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2342/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2601/2309-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2605/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2605/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-STAIR 8/2312-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2307-U2 - 2307 Valve Compartment Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2317/2316-4/34-139: 2-139-118-03	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2317/2322-34/4-139: 2-139-118-02	0:00, N. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-316/2316-U1-4/U2-4-139 302	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 303	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-309/2309-U1-4/U2-4-139 304	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2307/2309-4/4-139 2538	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-N-2317/2322-34/4-139 2311	0:00,	-	Yes		Yes	Yes
U2-FNP-N-2322/2334-4/34-139 2317	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2322/2334-4/34-139 2317A	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-S-2342/2330-4/4-139 2320	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-STAIR 2/2322-S02/4-139 2316	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2312-S08/4-139 2305	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2309-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2312-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2316-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2322-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2308-U2 - 2308 Waste Condensate and Monitor Tank Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-308/2308-U1-4/U2-4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2253/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2308/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2306/2308-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2308/2309-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2308/2310-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2309-U2 - 2309 Hatch Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2307/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2307/2309-4/4-139 2538	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-N-2310/2309-4/4-139 2537	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2310-U2 - 2310 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2310/2309-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2310/2309-4/4-139 2537	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2311-U2 - 2311 Recycle Evaporator Concentrates Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2312-U2 - 2312 Corridor

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2312 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2313-U2 - 2313 Floor Drain and Laundry Tank Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2314-U2 - 2314 Waste Evaporator Feed Filter Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2315-U2 - 2315 Recycle Waste Condenser Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2316-U2 - 2316 Passageway to Unit 1	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2321-U2 - 2321 Sample Panel Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A63	Aux.Bldg.-139'-Sample Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-1	U2-4 Detection System 2A-49-1 Room 2321	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2216/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2321/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2321/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2321-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2321/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2321/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2322-U2 - 2322 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A62	Aux.Bldg.-139'-South Corridor West End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

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### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2323-U2 - 2323 Sample Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A92	Aux.Bldg.-139'-Sample Panel Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-2	U2-4 Detection System 2A-49-2 Room 2323	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2209/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2322/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2323/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2321/2323-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2324-U2 - 2324 Primary Chemistry Lab	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-3	U2-4 Detection System 2A-49-3 Room 2324	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2203/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2217/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2218/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2324/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2324/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2321/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2324/2325-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2324-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2333/2324-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2325-U2 - 2325 Counting Room/Spectro-photometer Lab

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A65	Aux.Bldg.-139'-Gas Analysis Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2326-U2 - 2326 Clean Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A64	Aux.Bldg.-139'-Counting Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-49-5	U2-4 Detection System 2A-49-5 Room 2326	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2218/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2326/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2326/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2312/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2325/2326-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2347/2326-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2327-U2 - 2327 Valve Access Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2327/2312-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2312 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2327/2332-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2328-U2 - 2328 BTR Demineralizer Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2208/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2219/2328-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2328/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/2328-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2328/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2328-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2328-93/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2329-U2 - 2329 Pipe Tunnel	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2328/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2329/2604-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2329/2602-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2329/2603-4/93-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2605/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-STAIR 10/2329-S10/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/2329-93/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2330-U2 - 2330 Chiller Surge Tanks Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2330/2420-4/92-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2331-U2 - 2331 Valve Access Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-48-8	U2-4 Detection System 2A-48-8 Room 2331	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2188/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2208/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2231/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2232/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2331/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2331-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2330/2331-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2331/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-



## Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2332-U2 - 2332 MCC 1A/2A Area	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A66	Aux.Bldg.-139'-East Corridor Near MCC	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2327/2332-4/4-139	0:00, , U2 Unrated Barrier at ele 139 between Rooms 2327/2332 and fire areas 4/4	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2340-U2 - 2340 Demineralizer Compartment	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2221/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2230/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2340/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2340/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2340/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2332/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2327/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2331/2340-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2341-U2 - 2341 Pipe Chase

### Systems and Features

#### Extinguishers

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#### Hose Stations

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#### Active Fire Protection - Detection

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#### Active Fire Protection - Suppression

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#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/2341-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2342-U2 - 2342 Spent-Fuel Pool Pump Room	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-48-10	U2-4 Detection System 2A-48-10 Room 2342	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2188/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2342/2445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2342/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2342/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2342-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2342/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2342/2332-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2342/2330-4/4-139 2320	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2348-U2 - 2348 Cask Wash Area	

Extinguishers

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Hose Stations

—

Active Fire Protection - Detection

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Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2351-U2 - 2351 Chiller Pump and Surge Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2402-U2 - 2402 Passage to Unit 1	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-57-1	U2-4 Detection System 2A-57-1 Room 2402	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-2402/471-U2-4/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2317/2402-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2402/2215-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2403/2402-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2403/2402-4/4-155: 2-155-122-04	0:00, E. of 2402	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2402/402-U2-4/U1-4-155 401	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions		-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2403-U2 - 2403 Respirator Issue Room/Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-112-1	U2-4 Detection System 2A-112-1 Room 2403	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-403/2403-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2316/2403-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2317/2403-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2403/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2409-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2403/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2402-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2403/2317-4/34-139: 2-139-118-04	0:00, S. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2317-4/34-139: 2-139-118-05	0:00, S. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2409-4/4-155: 2-155-122-05	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-06	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-07	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-01	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-02	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-03	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2403-U2 - 2403 Respirator Issue Room/Combustible Storage Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2403/2317-4/34-139: 2-139-118-06	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2317-4/34-139: 2-139-118-07	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2402-4/4-155: 2-155-122-04	0:00, E. of 2402	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-08	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-09	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-14	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2403/2409-4/4-155 2464A	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U2 - 2405 Hatch Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A53	Aux.Bldg.-155'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
Containment Entrance	High level system descriptor is superseded by zone-level descriptor. See zone-level descriptor.	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D105	Hose Station - N2V43D105-FZ 4 Room 2446	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D122	Hose Station - N2V43D122-FZ 4 Room 2409	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D123	Hose Station - N2V43D123-FZ 4 Room 2408	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-15	U2-4 Detection System 2A-107-15 Room 2409	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-6	U2-4 Detection System 2A-107-6 Room 2422	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-7	U2-4 Detection System 2A-107-7 Room 2423	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-107-9	U2-4 Detection System 2A-107-9 Room 2446	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-57-2	U2-4 Detection System 2A-57-2 Room 2408	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-57-3	U2-4 Detection System 2A-57-3 Room 2409	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-75-1	U2-4 Detection System 2A-75-1 Room 2405	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U2 - 2405 Hatch Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-75-2	U2-4 Detection System 2A-75-2 Room 2406	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-75-3	U2-4 Detection System 2A-75-3 Room 2419	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-75-1	Preaction Sprinkler, U2-4, Elevation 155' Hatch Area Tool Room, Room 2405	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-75-2	Preaction Sprinkler, U2-4, Elevation 155' Hatch Area Tool Room, Room 2406	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
WS-2A-75-3	Preaction Sprinkler, U2-4, Elevation 155' Hatch Area Tool Room, Room 2419	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-2406/406-U2-4/U1-4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-405/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-406/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-407/2408-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-441/2406-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2306/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2307/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2308/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2309/2406-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2310/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2312/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2317/2409-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2321/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2324/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2327/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2328/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2332/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2409-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2340/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U2 - 2405 Hatch Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2602/2405-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2603/2408-93/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2606/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 10/2422-S10/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/2405-S08/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2418/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2421/2422-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2445/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2447/2446-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/2405-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2408/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2422/2466-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2427/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2215/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2418/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2420/2405-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2421/2405-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2446/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2459/2446-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U2 - 2405 Hatch Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-STAIR 8/2405-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2418/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2420/2419-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2423/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2419-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-01	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-2406/406-U2-4/U1-4-155: 2-155-131-02	0:00, W. of 406	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155: 2-155-122-12	0:00, E. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155: 2-155-122-13	0:00, E. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2421/2422-92/4-155: 2-155-131-05	0:00, E. of 'B' SFP HEAT EXCH. RM	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2421/2422-92/4-155: 2-155-131-06	0:00, E. of 'B' SFP HEAT EXCH. RM	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2447/2446-98/4-155: 2-155-132-02	0:00, E. of 2447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-05	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-06	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2403/2409-4/4-155: 2-155-122-07	0:00, N. of 2403	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155: 2-155-122-10	0:00, N. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155: 2-155-122-11	0:00, N. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2421/2405-92/4-155: 2-155-131-04	0:00, S. of 2421	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-406/2405-U1-4/U2-4-155 2403	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-407/2408-U1-4/U2-4-155 2404	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-441/2406-U1-4/U2-4-155 402	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-407/2405-U1-4/U2-4-155 2406	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2445/2446-4/4-155 2430	0:00, ,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-E-2445/2446-4/4-155 2446	0:00, ,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-N-2403/2409-4/4-155 2464A	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155 2408	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2422/2466-4/4-155 2461	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2422-S10/4-155 2431	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2418/2405-4/4-155 2409	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2459/2446-39/4-155 2432	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2409-S02/4-155 2411	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2405-U2 - 2405 Hatch Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-STAIR 8/2405-S08/4-155 2407	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2418/2409-4/4-155 2466	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2405-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2406-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2408-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-2409-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-
U2-4-AUX BUILDING-2422-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2406-U2 - 2406 Tool Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2408-U2 - 2408 Hallway	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



## Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2409-U2 - 2409 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A55	Aux.Bldg.-155'-Near CTMT Entrance	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2410A-U2 - 2410A 600-V Load Center	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-57-4	U2-4 Detection System 2A-57-4 Room 2410A	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-50-1	Local CO2 system in Fire Area 4 , room number 2410A, 600V Load Center 2M	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2317/2410A-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2402/2410A-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-01	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-02	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2410A/2403-4/4-155: 2-155-122-03	0:00, S. of 2410-A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2410A-U2 - 2410A 600-V Load Center	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2418-U2 - 2418 Auxiliary Building and Containment Purge Vent Equipment Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-5	U2-4 Detection System 2A-107-5 Room 2418	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2324/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2325/2418-4/97-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2326/2418-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2333/2418-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2347/2418-35/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2418/2419-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2418/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2418/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2418/2405-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2418/2409-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2347/2418-35/4-155: 2-155-120-06	0:00, F. of 2418	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2418/2405-4/4-155 2409	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2418/2409-4/4-155 2466	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2418-U2 - 2418 Auxiliary Building and Containment Purge Vent Equipment Room	

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2419-U2 - 2419 Demineralizer Hatch Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2422-U2 - 2422 Corridor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

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Fire Barriers

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Fire Dampers

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Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2423-U2 - 2423 Valve Compartment

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2424-U2 - 2424 Demineralizer Compartments	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2423/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2424/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2425-U2 - 2425 Demineralizer Compartments	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2607/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2424/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2425/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2426-U2 - 2426 Demineralizer Compartments	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2425/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2426/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2427-U2 - 2427 Demineralizer Compartments	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2423/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2426/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2427/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2429-U2 - 2429 Containment Purge Air Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A52	Aux.Bldg.-155'-Radwaste Vent. Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-108-1	U2-4 Detection System 2A-108-1 Room 2429	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-471/2429-U0-4/U2-4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2322/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2323/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2429-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2429-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2429/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2429-43/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2429/2241-4/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2429-44/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2429-S02/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2409/2429-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2334/2429-34/4-155: 2-155-119-11	0:00, F. of 2429	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2429-U2 - 2429 Containment Purge Air Equipment Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2429/CTMT-4/55-155 2467	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2429-43/4-155 2484	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2429-S02/4-155 2447	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2429-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2431-U2 - 2431 Duct/Pipe Chase	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2445-U2 - 2445 Spent-Fuel Pool Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-11	U2-4 Detection System 2A-107-11 Room 2448	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
2A-107-8	U2-4 Detection System 2A-107-8 Room 2445	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2342/2445-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2445/2446-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2448-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2202-20/15-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2447/2445-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2447/2448-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2448/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2447/2448-98/4-155: 2-155-132-01	0:00, W. of 2447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2445-U2 - 2445 Spent-Fuel Pool Heat Exchanger Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2445/2446-4/4-155 2430	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-
U2-FNP-E-2445/2446-4/4-155 2446	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2446-U2 - 2446 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A56	Aux.Bldg.-155'-New Fuel Area	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2448-U2 - 2448 SFPC Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
 Fire Zone ID: 2449-U2 - 2449 Demineralizer Room

Systems and Features

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2342/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2445/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2445/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2450-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2448/2449-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2450/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2450-U2 - 2450 Valve Compartment	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2451-U2 - 2451 Filter Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2342/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2238/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2450/2451-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2451/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2467-U2 - 2467 SFP Heat Exchanger Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-13	U2-4 Detection System 2A-107-13 Room 2467	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2408/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2446/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2423/2467-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2467/2421-4/92-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Fire Zone ID:** 2478-U2 - 2478 Motor Control Center Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-14	U2-4 Detection System 2A-107-14 Room 2478	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2332/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2418/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2478/2420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/2478-DU-ABVB-A/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/2478-DU-ABVB-B/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2238/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2419/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2445/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2451/2478-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2478/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2478-U2 - 2478 Motor Control Center Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2504-U2 - 2504 Stair No. 6, Floor El. 184'-0"	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-109-1	U2-4 Detection System 2A-109-1 Room 2504	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2459/2504-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2505-U2 - 2505 Spent-Fuel Pool Vent Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A87	Aux.Bldg.-184'-SFP Vent Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A88	Aux.Bldg.-184'-SFP Vent Equip. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D100	Hose Station - N2V43D100-FZ 4 Room 2505	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-109-2	U2-4 Detection System 2A-109-2 Room 2505	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2459/2505-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2604-U2 - 2604 Passage	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-105-11	U2-4 Detection System 2A-105-11 Room 2604	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-12	U2-4 Detection System 2A-105-12 Room 2605	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-13	U2-4 Detection System 2A-105-13 Room 2606	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-14	U2-4 Detection System 2A-105-14 Room 2607	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-15	U2-4 Detection System 2A-105-15 Room 2608	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-16	U2-4 Detection System 2A-105-16 Room 2609	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-105-17	U2-4 Detection System 2A-105-17 Room 2610	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2604-U2 - 2604 Passage

Systems and Features

### Active Fire Protection - Suppression

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2604/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2605/2420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2605/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2606/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2607/2425-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2422-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2426-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2608/2427-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2609/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2423-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2610/2424-4/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/2609-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2208/2604-4/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2330/2609-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2606/2607-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/2341-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2606-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2610-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2329/2604-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2602/2604-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2603/2604-4/93-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2604/2605-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2604/2610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2605/2609-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2606/2608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2607/2608-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2605/2329-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2606/2610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2607/2610-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2604-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2605/2208-4/4-131	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2605/2330-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2605/2351-4/4-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2608/2609-4/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2605-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2604-U2 - 2604 Passage	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-STAIR 10/2609-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 10/2608-S10/4-131 2334	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2602/2604-4/93-131 2329	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2604-S10/4-131 2333	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2609-S10/4-131 2335	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-4-AUX BUILDING-2604-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2605-U2 - 2605 Blowdown Pumps and Surge Tank Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2606-U2 - 2606 Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2607-U2 - 2607 Filter Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2608-U2 - 2608 Blowdown Heat Exchanger Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-004-U2 - Aux Building	Systems and Features
Fire Zone ID:	2609-U2 - 2609 Storage Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-004-U2 - Aux Building  
Fire Zone ID: 2610-U2 - 2610 Valve Compartment Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by performance-based approach isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using performance-based approach orifice isolation, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Performance-based approach Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 8, TE-BE-03-9899-001 Technical Evaluation in Support of GL 86-10 for DCP 03-2-9899, Reroute Cables For RWST Suction Valve Q2E21LCV0115D-B
<b>Inactive</b>	Yes
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the adequacy of the separation for redundant trains of the RWST suction valves. The valves are not separated in accordance with the requirements of Appendix R, Section III.G.2 in that the area of spatial separation is not provided with whole area suppression.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on spatial separation, location of combustibles, limited in situ combustibles, whole area detection with partial suppression, and fire barriers. In addition, administrative controls have been established to maintain the non-suppressed area free of transient combustibles or to establish compensatory actions.</p>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-004-U2 - Aux Building NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li> <li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li> <li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-37), Unit 2 Auxiliary Building, Elevations 100, 121, 130, 139, 155, and 184 ft. (Fire Area 2-004) ), Enclosure of one train with a 1 hour rated fire barrier with automatic fire suppression and detection (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request 05/31/1985 and 10/18/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression and lack of separation of redundant trains by 3 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>For power distribution system:</p> <ul style="list-style-type: none"> <li>• The redundant MCCs 2A and 2B are separated by a 2-ft-thick reinforced concrete floor at el 139 ft - 0 in.</li> <li>• Unsealed penetrations have been reviewed and will not affect separation.</li> <li>• Minimum horizontal separation between components is approximately 66 feet with complete automatic suppression coverage at el 121 ft - 0 in.</li> <li>• The redundant dc distribution panels 2C and 2F are separated by a 2-ft-thick reinforced concrete floor at el 139 ft.</li> <li>• The minimum horizontal separation between these redundant panels is approximately 55 ft and has complete automatic suppression coverage at el 121 ft - 0 in.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Previously Approved Engineering Evaluations

- A smoke detection system is installed in all rooms containing the subject equipment.
- Manual hose stations, portable extinguishers, and portable smoke removal equipment are available for use on the subject elevations.
- Manual actions can be performed to establish control of the atmospheric relief valves by closing the manual air vent valve to bleed off air from the diaphragm of the valve actuator, and thus control steam generator pressure and reactor coolant system temperature with the use of the manually controlled atmospheric relief valves.

For Instrumentation - condensate water storage tank level indication

- Redundant cables are separated by two, 2-ft-thick reinforced concrete floors at el 139 ft - 0 in. and 155 ft - 0 in. Unsealed penetrations have been reviewed and will not affect the separation.
- The Train-B cabling at el 121 ft - 0 in. is provided with automatic fixed suppression over 95 percent of its route.
- A smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations, portable carbon dioxide extinguishers, and portable smoke removal equipment are available for use on the subject elevations.

For instrument air - PORVs:

- Redundant cables are separated by a 2-ft-thick reinforced concrete floor at el 121 ft - 0 in. and 139 ft - 0 in.
- Unsealed penetrations in the subject floors have been reviewed
- Train A cables have full suppression coverage on el 100 ft - 0 in.
- Train B cables have full suppression coverage on el 121 ft - 0 in.
- Smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations and portable carbon dioxide extinguishers are available for use on the subject elevations.

For Auxiliary Feedwater:

- The 2-h provided by battery power to the turbine driven auxiliary feedwater UPS is adequate for existing procedures for manual operation to be implemented.

For HVAC - battery room ventilation:

- The requirement for battery and battery charger room ventilation is a long term requirement.
- Either portable ventilation equipment will be installed in the effected room(s) or
- The damaged ventilation system will be repaired within 20 hours of post-fire hot shutdown initiation to insure that battery room hydrogen concentrations do not exceed acceptable limits.

For steam release (cooldown):

- Manual action can be performed to establish manual control of the atmospheric relief valves by closing the manual air vent valve to bleed off air from the diaphragm of the valve actuator.

For Service Water:

- A long term manual action (greater than 24 h) can be performed to shift the service water discharge from the river and recirc. to the service water pond.

For neutron flux monitoring:

- Configuration of redundant equipment cables and equipment with respect to barriers would limit the fire to one train of equipment.
- Unsealed penetrations in the subject floor slab have been reviewed and will not affect the separation afforded by the concrete floor.

For boration/makeup, depressurization, and RCP seal integrity:

- Modification to provide a fire-rated barrier for Train-A raceways ADD1C-, ADD18A, and ADD21A.
- Full suppression coverage is provided in rooms 2163, 2162, 2161, 2160, and 2175

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Previously Approved Engineering Evaluations**

- Cables are separated by 2-ft-thick reinforced concrete except in room 2155 where there is 24 ft of separation with no intervening combustibles.
- Unsealed penetrations in the subject walls have been reviewed.
- A smoke detection system is installed in all rooms containing the subject cabling.
- Manual hose stations, portable CO, extinguishers, and portable smoke removal equipment are available for use on this elevation.
- Heat collectors have been installed on all sidewall sprinkler heads in room 2161.
- Modification is to provide a fire-rated barrier for the Train-B charging pump room cooler power cable (Raceways BFD02B, BFD03B, and BFD06B) where this cable is in close proximity to redundant Train-A cables.
- Automatic fire suppression system is provided.
- The blockout near Col. 20 which communicates between elevation 100 ft and 121 ft. will be sealed.
- EI 100 ft. and 121 ft - Automatic suppression and detection systems provided for the subject Train-B cables.
- Cables are separated by a 2-ft-thick reinforced concrete slab floor at el 121 ft - 0 in.
- Unsealed penetrations in the floor slab have been reviewed
- Raceways BFD2GD, BFD21B, BHF457, and BHF42 have been provided with a fire barrier in room 2186, to ensure that a source of borated makeup water is available from the RWST and will not require any manual operator action.
- The cabling for LCV115D has been protected by the fire barrier installed in the modification above and will not fail in the closed position.

For Smoke Detection:

- Smoke detection has been added to Room 2342 (spent fuel pool pump room).
- All cabling in this pipe chase (room 2341) is enclosed in conduit.
- The pipe chase has no in situ combustible.
- The pipe chase exits the auxiliary building below grade.
- This transition from room 2608 to room 2341 has a concrete wall with water tight penetrations.
- There is no redundant safe-shutdown cabling in room 2341.
- Low in situ combustible loading and the very low probability of a transient combustible being introduced.

For reactor coolant boundary integrity:

- Manual action can be performed to remove power from all cables in the shared raceway. This can be accomplished by opening the supply breaker on 125 V-dc switchgear 2A for 125 V-dc distribution panel 2C.

To summarize manual actions and licensee commitments:

- Manual operator actions can be performed to regain control of the transfer relays associated with the PORVs and the reactor head vent valves, restoration of the battery room ventilation system, manual control of the TDAFW pump, manual control of one main steam atmospheric relief valve, manual service water valve line up to the service water pond, and the isolation or RCS and pressurizer sampling line isolation valves.
- Licensee has also committed to install heat collectors on the sidewall mounted sprinkler/spray nozzles in room 2161, seal a floor slab blackout on elevation 121 feet - 0 inches and install a raceway fire barrier in the boric acid room 2186.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9925, DCP 03-2-9927, DCP 03-2-9930, and DCP 03-2-9899.

The portion of this exemption that support separation within the fire area are no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

A non fire-rated steel hatch exists between rooms 2163 (fire area 2-004) and room 2103 (fire area 2-001). That portion of the exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)
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<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>
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## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <ul style="list-style-type: none"> <li>-- Risk: Modification to seal MCCs 2C (N2R17B003) and 2DD (Q2R17B0099) and replace trip device in panel Q2R42B0001A, breakers LA08, LA13, LA20; Q2R42B0001B, breakers LB07, LB14.</li> </ul> <p>Procedures/Recovery Actions:</p> <ul style="list-style-type: none"> <li>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</li> </ul>
2151-U2	2151 Waste Gas Decay Tank Rooms	—	E, R, S, N	R, B	<p>Detection System, 2A-102-1:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-102-2:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-102-5:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-102-6:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>FireBarrier, U0-FNP-N-151/2151-U1-4/U2-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U0-FNP-N-152/2152-U1-4/U2-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U0-FNP-S-2151/151-U2-4/U1-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U0-FNP-S-2152/152-U2-4/U1-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2101/2151-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2102/2151-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2104/2152-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2105/2152-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2107/2165-90/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2108/2166-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2151/2201-4/14-100:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2151/2202-4/15-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2151/2254-4/12-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2152/2202-4/15-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2152/2210-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2165/2211-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2165/2212-4/16-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2166/2211-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2166/2226-4/19-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2153-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2166/2167-4/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2163-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2166/2185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2164/2165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2165/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2166/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2152-U2	2152 Valve Compartment Room	—	—	—	—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2153-U2	2153 Waste Gas Compressor Room	—	E, R, S, N	R, B	Detection System, 2A-102-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-153/2153-U1-4/U2-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2153/2203-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2153/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2153-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2153/2154-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2153/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2154-U2	2154 Waste Evaporator Steam Generator Room	—	E, R, D, S, N	E, R, B	Detection System, 2A-101-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-101-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-102-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-25-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>Detection System, 2A-25-3:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-25-4:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-25-5:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-25-7:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-25-8:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> </ul> <p>FireBarrier, U0-FNP-N-154/2154-U1-4/U2-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U0-FNP-N-155/2155-U1-4/U2-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U0-FNP-S-2160/160-U2-4/U1-4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2104/2163-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2105/2163-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2106/2164-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2111/2162-1/4-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2154/2204-4/4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2154A/2204-4/4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2154A/2209-4/4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2160/2206-4/4-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-100:</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2163/2213-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2163/2214-4/17-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2210-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2212-4/16-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2213-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2177/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2178/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2178/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2151/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2153/2154-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2155/2156-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2158/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2162/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2176/2177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Floor-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2163-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2153/2154A-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2156/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2157/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2158/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2161/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2161/2173-4/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2162/2184-4/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2150/2160-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2162/2170-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2167/2164-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2168/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2169/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2172/2161-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2173/2160-5/4-100:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2179/2177-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2179/2178-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2150/2160-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/2164-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2164/2165-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-4-AUX BUILDING-2154-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2155-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2160-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2161-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2162-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2154A-U2	2154A Valve Compartment Room	—	—	—	—
2155-U2	2155 Passageway to Unit 1	—	—	—	—
2156-U2	2156 Holdup Tank Room	—	E, R, S, N	R, B	Detection System, 2A-104-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-156/2156-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2156/156-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2301-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2157-U2	2157 Holdup Tank Room	—	E, R, S, N	R, B	<p>FireBarrier, U2-FNP-Ceiling-2156/2302-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2156/2314-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2156/2315-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2155/2156-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2156/2157-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2156/2157-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2156/2161-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2156/2209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2156/2205-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-104-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2157/157-U2-4/U1-4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-157/2157-U1-4/U2-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2157/2303-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2157/2304-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2157/2313-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2156/2157-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2156/2157-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2157/2161-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2157/2208-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2158-U2	2158 Holdup Tank Room	—	E, R, S, N	R, B	<p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-104-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2158/158-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-158/2158-U1-4/U2-4-121: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2158/2304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2158/2305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2158/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2157/2158-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2158/2161-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2158/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
2159-U2	2159 Recycle Evaporator Feed Pump Room	—	E, R, S, N	R, B	<p>Detection System, 2A-101-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2159/159-U2-4/U1-4-100: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2159/2206-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2159/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2159/2160-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2160-U2	2160 Hatch Area	—	—	—	FireBarrier, U2-FNP-Ceiling-2140/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2140/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2140/2159-4/4-100: -- Barrier: Required to support a fire area boundary evaluation.
2161-U2	2161 Corridor	—	—	—	—
2162-U2	2162 Hallway	—	—	—	—
2163-U2	2163 WDS Control Panel Room	—	—	—	—
2164-U2	2164 Storage Room	—	—	—	—
2165-U2	2165 Waste Gas Decay Tank Room	—	—	—	—
2166-U2	2166 Waste Gas Decay Tank Room	—	—	—	—
2168-U2	2168 Chemical Drain Tank Room	—	E, R, S, N	R, D, B	Detection System, 2A-25-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2109/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2110/2168-1/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2168/2224-4/18-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2168/2225-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2167/2168-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2168/2185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2168/2163-1/4-100: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2170-U2	2170 Letdown Heat Exchanger Room	—	E, R, D, S, N	R, B	<p>FireBarrier, U2-FNP-W-2169/2168-1/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.  Restricted transient controls, U2-4-AUX BUILDING-2168-Restricted transient controls:  -- DID: Required to meet DID criteria.</p> <p>Detection System, 2A-101-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2111/2170-1/5-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2170/2209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2170/2216-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2170/2217-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2162/2170-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2170/2172-4/5-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2161/2170-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-S-2162/2170-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-S-2171/2170-5/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-W-2171/2170-5/4-100:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
2175-U2	2175 Hallway	E	E, R, D	R, B	<p>Detection System, 2A-118-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2175/2208-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2175/2222-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2175/2230-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2173/2175-5/4-100:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2174/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2181/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2175/2186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2160/2175-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-118-1: -- EEEE/LA: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2176/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2176/2177-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2160/2176-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2176/2180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2176-U2	2176 Secondary Spent-Resin Storage Tank Room	—	—	R, B	
2177-U2	2177 Pump Room	—	—	—	—
2178-U2	2178 Filter Room	—	—	—	—
2180-U2	2180 Recycle Evaporator Steam Generator Room	—	E, R, S, N	R, B	Detection System, 2A-101-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-101-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-101-15: -- EEEE/LA: Required to support an Engineering Evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2180/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2187/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2172/2186-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2175/2180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2186/2188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2175/2186-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2176/2180-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2179/2187-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2186/CTMT-4/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2187/2188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2179/2180-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2186-U2	2186 Boric Acid Area	—	E, R, D	R, B	Detection System, 2A-103-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2188/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2188/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2188/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2186/2188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/2609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2187/2188-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2188/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2188/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2187-U2	2187 Hydro Test Pump Room	—	—	—	—
2188-U2	2188 Boric Acid Tank Area	—	—	—	—
2203-U2	2203 Waste Condenser Tanks and Pump Room	E	E, R, D, S, N	E, R, B	Detection System, 2A-103-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-103-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-104-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>Detection System, 2A-104-9:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-35-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-35-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-35-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-35-4:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-35-5:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-N-203/2203-U1-4/U2-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2205/205-U2-4/U1-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2207/207-U2-4/U1-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-N-253/2253-U1-4/U2-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2140/2207-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2140/2253-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2150/2207-89/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2153/2203-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2154A/2209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2159/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2160/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2161/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2162/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2170/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2172/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2173/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2174/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2175/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2175/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2178/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2203/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2203/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2205/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2207/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2328-4/4-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2312-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2215/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2222/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2237/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2203/2204-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2204/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2206/2207-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2206/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2207/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2208/2604-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2209/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2214/2209-17/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2217/2218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2218/2222-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2237/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2245/2209-20/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-CHASE2/2203-51/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Floor-2161/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2156/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2157/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2158/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2204/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2206/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2209/2216-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2209/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2218/2223-4/1-121:



## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/2239-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2206/2253-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2209-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2156/2205-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2188/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2202/2203-15/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2209/2210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2222/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2222/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2237/CTMT-4/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2601/2207-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2208-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2208-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-4-AUX BUILDING-2205-Restricted

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2204-U2	2204 Waste Evaporator Package Room	—	E, R, S, N	R, B	<p>transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Restricted transient controls, U2-4-AUX BUILDING-2207-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Restricted transient controls, U2-4-AUX BUILDING-2209-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Water Suppression, WS-2A-35-1:  -- EEEE/LA: Required to support a fire area boundary evaluation.  Water Suppression, WS-2A-35-2:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 2A-104-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.  FireBarrier, U0-FNP-N-204/2204-U1-4/U2-4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2153/2204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2154/2204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2154A/2204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2161/2204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-Ceiling-2204/2317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2203/2204-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-E-2204/2205-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U2-FNP-N-2204/2209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.  Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
2205-U2	2205 Passageway to Unit 1	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2206-U2	2206 Heat Exchanger Room	—	E, R, S, N	R, B	<p>Detection System, 2A-104-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-S-2206/206-U2-4/U1-4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2159/2206-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2160/2206-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2206/2306-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2206/2307-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2206/2310-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2158/2206-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2206/2207-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2206/2253-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2206/2208-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2206/2253-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>
2207-U2	2207 Hatch Area	—	—	—	—
2208-U2	2208 Corridor	—	—	—	—
2209-U2	2209 Hallway	—	—	—	—
2215-U2	2215 Duct and Pipe Chase	—	—	R, B	<p>FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2162/2215-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2215/2205-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2214/2215-17/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2215/2209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2215/2322-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2215/2409-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2216-U2	2216 Valve Compartments Area	—	E, R, D	R, B	<p>FireBarrier, U2-FNP-N-2215/STAIR 2-4/S02-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2402/2215-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2215/2209-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2215/2317-4/34-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2215/2409-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-STAIR 2/2215-S02/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-STAIR 2/2215-S02/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2215/2318-4/40-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2215/471-4/44-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-103-2:  -- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2170/2216-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2171/2216-5/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2183/2216-1/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2216/2321-4/4-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2209/2216-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2216/2217-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2216/2223-4/1-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2209/2216-4/4-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2217-U2	2217 Volume Control Tank Room	—	E, R, S, N	R, B	Detection System, 2A-103-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2170/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2171/2217-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2217/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2216/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2217/2218-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2217/2223-9/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2217-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2217/2223-4/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2217/2223-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2218-U2	2218 Chiller Unit Room	—	—	—	—
2219-U2	2219 Pipe Chase	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2178/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2219/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2208/2219-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2219-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2220-U2	2220 Valve Compartment Room	—	E, R, S, N	R, B	Detection System, 2A-103-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2177/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2179/2220-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2220/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2220-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2220/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2221-U2	2221 Primary Spent-Resin Storage Tank Room	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2176/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2221/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2221/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2221/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2220/2221-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2222-U2	2222 Corridor	R, D	—	—	Water Suppression, WS-2A-35-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2230-U2	2230 Recycle Evaporator Package Room	—	E, R, S, N	R, B	Detection System, 2A-103-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2175/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2180/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2186/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2221/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2230/2237-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2222/2230-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2231-U2	2231 Sluice Pump Room	—	E, R, S, N	R, B	Detection System, 2A-103-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2179/2231-96/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2231/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2231/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2220/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2231/2232-4/4-121:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2232-U2	2232 Sluice Filter Room	—	E, R, D	R, B	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2208/2231-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Detection System, 2A-103-8: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2187/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2230/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2231/2208-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2208/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2231/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2188/2232-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2237-U2	2237 Corridor	—	—	—	—
2238-U2	2238 Cask Storage Area	—	E, R, S, N	R, B	Detection System, 2A-107-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-107-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-E-2237/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2239/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2240/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2238-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/2238-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/2239-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2447/2348-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2448-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2238/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2459/2240-39/4-155:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2459/2348-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2239-U2	2239 Transfer Canal	—	—	—	—
2240-U2	2240 Spent-Fuel Pool Room	—	—	—	—
2253-U2	2253 Valve Compartment	—	—	—	—
2301-U2	2301 Seal Water Filter Room	—	E, R, D, S, N	R, B	Detection System, 2A-105-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-18: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-302/2302-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-303/2303-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-304/2304-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-305/2305-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2301/301-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2301-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2302-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2156/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2303-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2157/2313-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2158/2304-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2158/2305-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2158/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2301/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2302/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2303/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2304/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2305/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2311/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2313/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2314/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2315/2404-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2305/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2311/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2313/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2301/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2307/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2315/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2302-U2	2302 Recycle Evaporator Feed Filter Room	—	—	—	—
2303-U2	2303 Reactor Coolant Filter Room	—	—	—	—
2304-U2	2304 Waste Monitor	—	—	—	—
2305-U2	2305 Seal Injection Filter Room	—	—	—	—
2306-U2	2306 Recycle Evaporator Feed Demineralizer Room	—	—	R, B	FireBarrier, U0-FNP-N-306/2306-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2306/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2305/2306-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2306/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2306/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2307-U2	2307 Valve Compartment Room	E	E, R, D, S, N	E, R, B	<p>Detection System, 2A-105-5:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-105-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-48-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-48-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-48-3:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-48-5:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-48-6:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-48-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-48-9:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-49-4:  -- EEEE/LA: Required to support an Engineering Evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-316/2316-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-309/2309-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2188/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2205/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2206/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2207/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2312-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2221/2327-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2222/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2237/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2307/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2309/2406-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2310/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2312/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2316/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2327/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2332/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2332/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2322-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2308/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2309/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2317/2316-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2322/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2324/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2326/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2327/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2330/2609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2238-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2347/2332-35/4-139:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2403/2316-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2306/2307-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2307/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2308/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2309/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2311/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2313/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2317/2322-34/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2322/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2332/CTMT-4/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2322-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2314-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2312/2315-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2330/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-S-2342/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2347/2325-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2301/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2307/2311-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2315/2316-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2342/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2601/2309-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2312-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-4-AUX BUILDING-2309-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2312-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2316-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2322-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-48-1: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-48-2: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2308-U2	2308 Waste Condensate and Monitor Tank Demineralizer Room	—	—	R, B	FireBarrier, U0-FNP-N-308/2308-U1-4/U2-4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2253/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2308/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2306/2308-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2308/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2308/2310-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2309-U2	2309 Hatch Area	—	—	—	FireBarrier, U2-FNP-E-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2307/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2310-U2	2310 Valve Compartment Room	—	—	—	FireBarrier, U2-FNP-E-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2310/2309-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2311-U2	2311 Recycle Evaporator Concentrates Filter Room	—	—	—	—
2312-U2	2312 Corridor	—	—	—	FireBarrier, U2-FNP-N-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2313-U2	2313 Floor Drain and Laundry Tank Filter Room	—	—	—	—
2314-U2	2314 Waste Evaporator Feed Filter Room	—	—	—	—
2315-U2	2315 Recycle Waste Condenser Filter Room	—	—	—	—
2316-U2	2316 Passageway to Unit 1	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2321-U2	2321 Sample Panel Room	—	E, R, S, N	R, B	Detection System, 2A-49-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2216/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2321/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2321/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2321-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2321/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2321/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2322-U2	2322 Hallway	—	—	—	—
2323-U2	2323 Sample Room	—	E, R, S, N	R, B	Detection System, 2A-49-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2209/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2322/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2323/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2321/2323-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2324-U2	2324 Primary Chemistry Lab	—	E, R, S, N	R, B	Detection System, 2A-49-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2203/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2217/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2218/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2324/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2324/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2321/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2324/2325-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2324-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2333/2324-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2325-U2	2325 Counting Room/Spectro- photometer Lab	—	—	—	—
2326-U2	2326 Clean Storage Room	—	E, R, S, N	R, B	Detection System, 2A-49-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2218/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2326/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2326/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2312/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2325/2326-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2347/2326-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2327-U2	2327 Valve Access Area	—	—	—	Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-N-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2327/2312-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2327/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2328-U2	2328 BTR Demineralizer Room	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2208/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2219/2328-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2328/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/2328-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2328/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2328-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2328-93/4-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2329-U2	2329 Pipe Tunnel	—	—	R, B	FireBarrier, U2-FNP-E-2329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2328/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2329/2604-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2329/2602-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2329/2603-4/93-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2605/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2329-S10/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/2329-93/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2330-U2	2330 Chiller Surge Tanks Pump Room	—	—	—	FireBarrier, U2-FNP-CEILING-2330/2420-4/92-139: -- Barrier: Required to support a fire area boundary evaluation.
2331-U2	2331 Valve Access Area	—	E, R, S, N	R, B	Detection System, 2A-48-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2188/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2208/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2231/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2232/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2331/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2331-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2330/2331-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2331/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2332-U2	2332 MCC 1A/2A Area	—	—	—	FireBarrier, U2-FNP-W-2327/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation.
2340-U2	2340 Demineralizer Compartment	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2221/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2230/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2340/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2340/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2340/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2341-U2	2341 Pipe Chase	—	—	R, B	FireBarrier, U2-FNP-S-2332/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2327/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2331/2340-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2342-U2	2342 Spent-Fuel Pool Pump Room	—	E, R, S, N	R, B	FireBarrier, U2-FNP-E-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/2341-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Detection System, 2A-48-10: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2188/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2342/2445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2342/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2342/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2342-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2342/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2342/2332-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2348-U2	2348 Cask Wash Area	—	—	—	—
2351-U2	2351 Chiller Pump and Surge Tank Room	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2402-U2	2402 Passage to Unit 1	—	E, R, D	R, B	Detection System, 2A-57-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U0-FNP-S-2402/402-U2-4/U1-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-2402/471-U2-4/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2402-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2402/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2402/2410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2402/2215-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2403/2402-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2403-U2	2403 Respirator Issue Room/Combustible Storage Room	—	E, R, S, N	R, B	Detection System, 2A-112-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-403/2403-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2316/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2403-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2403/2316-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2410A/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2403/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2403/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2410A/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2403/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2405-U2	2405 Hatch Room	E, D	E, R, D, S, N	E, R, D, B	<p>FireBarrier, U2-FNP-W-2403/2402-4/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2404/2403-97/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-  Procedures/Recovery Actions:  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-107-15:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-107-6:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-107-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-107-9:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-57-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-57-3:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-75-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-75-2:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-75-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-E-2406/406-U2-4/U1-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-405/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-406/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-407/2408-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-441/2406-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-407/2405-U1-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2306/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2307/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2308/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2309/2406-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2310/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2312/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2409-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2321/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2322/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2323/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2324/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2327/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2328/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2332/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2334/2409-34/4-155:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2340/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2602/2405-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2603/2408-93/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2606/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2215/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2402/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2404/2405-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2421/2422-92/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2445/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2447/2446-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2403/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2404/2409-97/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2408/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2409/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2422/2466-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2427/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2418/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2420/2405-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2421/2405-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2446/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2459/2446-39/4-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2418/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2420/2419-92/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2423/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2419-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-4-AUX BUILDING-2405-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2406-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2408-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-4-AUX BUILDING-2409-Restricted transient controls: -- DID: Required to meet DID criteria. Restricted transient controls, U2-4-AUX BUILDING-2422-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-75-1: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-75-2: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-75-3: -- DID: Required to meet DID criteria.
2406-U2	2406 Tool Room	—	—	—	—
2408-U2	2408 Hallway	—	—	—	—
2409-U2	2409 Hallway	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2410A-U2	2410A 600-V Load Center	—	E, R, S, N	R, B	Detection System, 2A-57-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2317/2410A-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2402/2410A-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2410A/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2410A/2403-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2418-U2	2418 Auxiliary Building and Containment Purge Vent Equipment Room	—	E, R, S, N	R, B	Detection System, 2A-107-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2324/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2325/2418-4/97-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2326/2418-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2333/2418-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2347/2418-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2419-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2418/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2418/2405-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2418/2409-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2419-U2	2419 Demineralizer Hatch Area	—	—	—	—
2422-U2	2422 Corridor	—	—	—	—
2423-U2	2423 Valve Compartment	—	—	—	—
2424-U2	2424 Demineralizer Compartments	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2423/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2424/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2425-U2	2425 Demineralizer Compartments	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2607/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2424/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2425/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2426-U2	2426 Demineralizer Compartments	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2423/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2425/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2426/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2427-U2	2427 Demineralizer Compartments	—	—	R, B	<p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2608/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2423/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2426/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2427/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
2429-U2	2429 Containment Purge Air Equipment Room	—	E, R, D, S, N	E, R, D, B	<p>Detection System, 2A-108-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-E-471/2429-U0-4/U2-4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2322/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2323/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2334/2429-34/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2236/2429-6/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2429/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2452/2429-43/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 2/2429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2429/2241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation.</p>



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-2454/2429-44/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2409/2429-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-4-AUX BUILDING-2429-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2431-U2	2431 Duct/Pipe Chase	—	—	R	Detection System, 2A-107-11: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2A-107-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2342/2445-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2445/2446-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2448-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2202-20/15-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2447/2445-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation.
2445-U2	2445 Spent-Fuel Pool Heat Exchanger Room	—	E, R, S, N	R, B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-2445/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2447/2448-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2448/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2446-U2	2446 Hallway	—	—	—	—
2448-U2	2448 SFPC Pump Room	—	—	—	—
2449-U2	2449 Demineralizer Room	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2342/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2450-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2448/2449-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2450/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2450-U2	2450 Valve Compartment	—	—	—	—
2451-U2	2451 Filter Room	—	—	R, B	FireBarrier, U2-FNP-Ceiling-2342/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2238/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2450/2451-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2451/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2467-U2	2467 SFP Heat Exchanger Room	—	E, R, S, N	R, B	Detection System, 2A-107-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-N-2408/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2446/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2423/2467-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2467/2421-4/92-165: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2478-U2	2478 Motor Control Center Room	—	E, R, S, N	R, B	Detection System, 2A-107-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2332/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2418/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2478/2420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2478/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/2478-DU-ABVB-A/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/2478-DU-ABVB-B/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2238/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2419/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2445/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2451/2478-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2478/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2504-U2	2504 Stair No. 6, Floor El. 184'-0"	—	E, R	R, B	<p>Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-109-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2459/2504-39/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
2505-U2	2505 Spent-Fuel Pool Vent Equipment Room	—	E, R	R, B	<p>Detection System, 2A-109-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2459/2505-39/4-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.</p>
2604-U2	2604 Passage	—	E, R, D, S, N	E, R, B	<p>Detection System, 2A-105-11: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-105-12: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- NPO: Required to meet NPO criteria. Detection System, 2A-105-13: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-14: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-15: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-16: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-105-17: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2604/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2604/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2605/2420-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2605/2421-4/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2606/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2607/2425-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2422-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2426-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2608/2427-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2609/2421-4/92-155:

## Fire Safety Analysis

**Fire Area ID:** 2-004-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2423-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2610/2424-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/2609-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2208/2604-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2330/2609-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2606/2607-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/2341-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2610/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2606-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2610-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2329/2604-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2602/2604-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2603/2604-4/93-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2604/2605-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2604/2610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2605/2609-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2606/2608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2607/2608-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-004-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-STAIR 10/2608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2605/2329-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2606/2610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2607/2610-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2604-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2208-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2330-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2605/2351-4/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2608/2609-4/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2605-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2609-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-4-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-4-AUX BUILDING-2604-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2605-U2	2605 Blowdown Pumps and Surge Tank Room	—	—	—	—
2606-U2	2606 Filter Room	—	—	—	—
2607-U2	2607 Filter Room	—	—	—	—
2608-U2	2608 Blowdown Heat Exchanger Room	—	—	—	—
2609-U2	2609 Storage Room	—	—	—	—
2610-U2	2610 Valve Compartment Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 2-005 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2171	2171 Storage Room	
2172	2172 Hallway	
2173	2173 Charging/Safety Injection Pump Room	
2174	2174 Charging/Safety Injection Pump Room	
2181	2181 Charging/Safety Injection Pump Room	
2182	2182 Contaminated Storage Area	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2171 - 2171 Storage Room	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-3	U2-5 Detection System 2A-101-3 Room 2171	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2111/2171-1/5-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2171/2216-5/4-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2171/2217-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2171/2172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2171/2182-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2171/2170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2183/2171-1/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2171/2170-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2171/2183-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2171/2170-5/4-100 2163	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-5-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2172 - 2172 Hallway	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-4	U2-5 Detection System 2A-101-4 Room 2172	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-101-1	Preaction Sprinkler System, U2-5, Auxiliary Building West - Hallway, Room 2172	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2172/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2172/2223-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2170/2172-4/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2171/2172-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2172/2186-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2172/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2181/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2172/2161-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2172/2182-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2173/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2174/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2181/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2172/2223-5/1-100: 2-121-117-01	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2172/2223-5/1-100: 2-121-117-02	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2172 - 2172 Hallway	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2172/2161-5/4-100 2155	0:00,	-	Yes		Yes	-
U2-FNP-W-2173/2172-5/5-100 2160	0:00,	-	Yes		Yes	Yes
U2-FNP-W-2174/2172-5/5-100 2161	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2181/2172-5/5-100 2162	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-5-AUX BUILDING-2172-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-5-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2173 - 2173 Charging/Safety Injection Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-5	U2-5 Detection System 2A-101-5 Room 2173	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2173/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2173/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2161/2173-4/5-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2173/2174-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2173/2160-5/4-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2173/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2173/2172-5/5-100 2160	0:00,	-	Yes		Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-5-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2174 - 2174 Charging/Safety Injection Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-6	U2-5 Detection System 2A-101-6 Room 2174	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2174/2218-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2174/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2173/2174-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2174/2181-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2174/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2174/2172-5/5-100 2161	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-5-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2181 - 2181 Charging/Safety Injection Pump Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-11	U2-5 Detection System 2A-101-11 Room 2181	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2181/2223-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2181/2175-5/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2174/2181-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2181/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2181/2172-5/5-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2181/2223-5/1-100: 2-121-117-03	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2181/2223-5/1-100: 2-121-117-04	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2181/2172-5/5-100 2162	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-5-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2182 - 2182 Contaminated Storage Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-12	U2-5 Detection System 2A-101-12 Room 2182	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2182/2223-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2171/2182-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2182/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2172/2182-5/5-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2182/2183-5/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-5-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-005 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by performance-based approach isolating the VCT to prevent boron dilution and by charging borated water from the RWST using performance-based approach Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using performance-based approach Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	



## Fire Safety Analysis

**Fire Area ID:** 2-005 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach performance-based approach Train A/Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2A/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	

## Fire Safety Analysis

**Fire Area ID:** 2-005 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-005 - Aux Building Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-40), Units 1 and 2 (Rooms 173, 161, 171, 170, 175, 174, 179, 181, 2173, 2161, 2170, 2171, 2175, 2174 and 2181) 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The fire severity in the affected rooms is less than 30 minutes for all cases.</li> <li>• A sprinkler system is installed in rooms 161, 179, 2161, and 2179</li> <li>• Smoke detection systems in all rooms will provide early warning capability and protection from the spread of a fire from one room to the next.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

### Licensing Action

Appendix R Exemption (No. 2-8), Unit 2 Auxiliary Building (Fire Area 2-005) 20 feet separation without intervening combustibles, with automatic fire suppression (III.G.2.b criteria)

### Licensing Basis

Exemption request per 03/13/1985, 10/18/1985, and 01/27/1986 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, and lack of separation of redundant trains by 3 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:

For physical separation of the Charging Pumps

- The pump rooms are watertight with 2-ft thick reinforced concrete walls.
- Penetrations in the pump room walls are sealed to provide a watertight boundary
- Lubricating oil and cable insulation are the only combustibles present in the pump rooms. Lubricating oil would be contained within the individual rooms or would drain into the sump servicing the room.
- Fixed suppression system is installed in the hallway.
- Smoke detection systems are installed throughout the area including the three charging pump rooms.
- The maximum fire severity in these rooms due to in-situ loading is estimated to be less than 1 hour.
- The penetrations that are sealed have been included into the penetration seal surveillance program.

For Boron/Makeup

- Manual actions can be performed to regain RCS makeup
- A fire barrier is provided for raceway sections AHF15A, AHD12B, AIE258, AIE12B and AIE15B to protect cables for the boric acid flow control and the RWST to the boric acid blender valves. (These subject barriers also protect the RWST charging pump suction, boric acid dilution injection to the VCT cables and the redundant RWST charging pump suction train-A cables )
- Partial suppression coverage is provided
- Redundant RWST charging pump suction valve and cables are separated by approximately 15 feet.
- Detection is provided in the area of the subject components.
- Low in-situ combustible loading
- Automatic suppression covers most of the raceway fire barriers.
- Additional fire barriers that have been installed to ensure that a fire induced RCS letdown will not occur.

For Reactor Coolant Boundary Integrity

- Manual actions can be performed to regain the control of the PORVs and reactor head vent valves.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9899 and DCP 03-2-9925.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q2R42B0001A, breaker LA20. Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2171	2171 Storage Room	—	E, R, D, S, N	R, B	Detection System, 2A-101-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2111/2171-1/5-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2171/2216-5/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2171/2217-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2171/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2171/2182-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2171/2170-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2183/2171-1/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2171/2170-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2171/2183-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-5-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2172	2172 Hallway	E, D	E, R, D, S, N	E, R, B	Detection System, 2A-101-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2172/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2172/2223-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2170/2172-4/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2171/2172-5/5-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2172/2186-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2172/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2181/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2172/2161-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2172/2182-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2173/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2174/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2181/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-5-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-5-AUX BUILDING-2172-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-101-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.  Detection System, 2A-101-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2173/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2173/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2161/2173-4/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2173/2174-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2173/2160-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2173/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-5-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions:
2173	2173 Charging/Safety Injection Pump Room	—	E, R, D, S, N	R, B	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2174	2174 Charging/Safety Injection Pump Room	—	E, R, D	R, B	-- Risk: Required to meet Risk criteria. Detection System, 2A-101-6: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2174/2218-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2174/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2173/2174-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2174/2181-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2174/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-5-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
2181	2181 Charging/Safety Injection Pump Room	—	E, R, D, S, N	R, B	Detection System, 2A-101-11: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2181/2223-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2181/2175-5/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2174/2181-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2181/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2181/2172-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-5-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-005 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2182	2182 Contaminated Storage Area	—	E, R, D, S, N	R, B	Detection System, 2A-101-12: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2182/2223-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2171/2182-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2182/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2172/2182-5/5-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2182/2183-5/1-100: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-5-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2185	2185 Component Cooling Water Heat Exchanger Room	
2189	2189 Plant Heating Equipment Room	
2190	2190 Motor Control Center 2E Room	
2191	2191 Auxiliary Feedwater Pump Room	
2192	2192 Auxiliary Feedwater Pump Room	
2193	2193 Auxiliary Feedwater Pump Room	
2194	2194 Equipment Room	
2195	2195 Access Hatch Room	
2199	2199 Phosphate Tank and Pump Area	
2236	2236 Duct Chase	
2241	2241 Main Steam and Feed-water Valve Room	
2242	2242 Pipe Chase	
2243	2243 Pipe Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2185 - 2185 Component Cooling Water Heat Exchanger Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A75	Aux.Bldg.-100'-CCW Pump Room	-	-		Yes	-
A76	Aux.Bldg.-100'-CCW Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D108	Hose Station - N2V43D108-FZ 6 Room 2185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-119-2	U2-6 Detection System 2A-119-2 Room 2185	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-27-1	U2-6 Detection System 2A-27-1 Room 2185	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-27-1	Local CO2 system in Fire Area 6 , room number 2185, 5 KV Disconnect Switch 2A (CCW Pump 2B)	-	-		-	-
GS-2A-27-2	Local CO2 system in Fire Area 6 , room number 2185, 5 KV Disconnect Switch 2B (CCW Pump 2B)	-	-		-	-
WS-2A-27-1	Praaction Sprinkler System, U2-6, CCW Heat Exchanger Room, Room 2185	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2118/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2119/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2120/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2121/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2122/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2128/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2129/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2130/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2131/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2185/2228-6/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2229-6/21-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2233-6/21-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2235-6/23-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Fire Zone ID:** 2185 - 2185 Component Cooling Water Heat Exchanger Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2236-6/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2250-6/31-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2166/2185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2167/2185-94/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2168/2185-4/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2189/2185-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2190/2185-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2185-8/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2185-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2123/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2123/2185-6/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2184/2185-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2185/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2167/2185-94/6-100: 2-100-113-01	0:00, N. of 2167	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2167/2185-94/6-100: 2-100-113-02	0:00, N. of 2167	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 1/2185-S01/6-100 2169	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2167/2185-94/6-100 2166	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2185-S01/6-100 Elev. No. 4 (1)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2185-8/6-100 2165	0:00,	-	Yes		Yes	-
U2-FNP-W-2117/2185-9/6-100 2167	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-6-AUX BUILDING-2185-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2189 - 2189 Plant Heating Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A75	Aux.Bldg.-100'-CCW Pump Room	-	-		Yes	-
A76	Aux.Bldg.-100'-CCW Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D108	Hose Station - N2V43D108-FZ 6 Room 2185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-10	U2-6 Detection System 2A-102-10 Room 2193	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-62-1	U2-6 Detection System 2A-62-1 Room 2189	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-62-2	U2-6 Detection System 2A-62-2 Room 2190	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-62-3	U2-6 Detection System 2A-62-3 Room 2194	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-62-4	U2-1 Detection System 2A-62-4 Room 2199	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-62-2	Praeaction Sprinkler System, U2-6, Motor Control Center 2E Room, Room 2190	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2241/2189-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2190-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2193-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2194-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2199-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2189/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2191/2190-6/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2192/2193-6/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2194/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Fire Zone ID:** 2189 - 2189 Plant Heating Equipment Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2251/2195-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2184/2189-1/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2191/2194-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2193/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2194/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2189/2185-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2190/2185-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2191/2190-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2191/2199-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2195/2241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2195/2241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2195/2241-6/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2190/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2199/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2191/2190-6/6-100 2174	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2192/2193-6/6-100 2176	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-STAIR 1/2190-S01/6-100 2170	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-6-AUX BUILDING-2199-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2190 - 2190 Motor Control Center 2E Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A75	Aux.Bldg.-100'-CCW Pump Room	-	-		Yes	-
A76	Aux.Bldg.-100'-CCW Pump Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D108	Hose Station - N2V43D108-FZ 6 Room 2185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-6-AUX BUILDING-2190-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2191 - 2191 Auxiliary Feedwater Pump Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-8	U2-6 Detection System 2A-102-8 Room 2191	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2241/2191-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2191/2190-6/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2191/2194-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2191/2190-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2191/2199-6/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2192/2191-6/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2191/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2191/2190-6/6-100 2174	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2192 - 2192 Auxiliary Feedwater Pump Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-102-9	U2-6 Detection System 2A-102-9 Room 2192	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2192/2241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2241/2192-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2192/2193-6/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2192/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2192/2191-6/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2192/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2192/2193-6/6-100 2176	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-006 - Aux Building  
Fire Zone ID: 2193 - 2193 Auxiliary Feedwater Pump Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

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#### Fire Barriers

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#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

Fire Area ID:	2-006 - Aux Building	Systems and Features
Fire Zone ID:	2194 - 2194 Equipment Room	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

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### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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Fire Safety Analysis

Fire Area ID:	2-006 - Aux Building	Systems and Features
Fire Zone ID:	2195 - 2195 Access Hatch Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-006 - Aux Building	Systems and Features
Fire Zone ID:	2199 - 2199 Phosphate Tank and Pump Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

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Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Fire Zone ID:** 2236 - 2236 Duct Chase

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2236-6/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2236/2236-1/6-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2184-1/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2223-6/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2334-6/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2429-6/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2250/2236-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2250/2236-31/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2236/2185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2346-6/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2452-6/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2185-1/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2236/2235-6/23-121: 2-121-116-05	0:00, N. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2346-6/41-139: 2-139-119-05	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-02	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-03	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2236 - 2236 Duct Chase	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2236/2235-6/23-121: 2-121-116-04	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139: 2-139-119-03	0:00, E. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139: 2-139-119-04	0:00, E. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-01	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-02	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-03	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-04	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

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### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Fire Zone ID:** 2241 - 2241 Main Steam and Feed-water Valve Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-106-1	U2-6 Detection System 2A-106-1 Room 2241	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2192/2241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2241/2189-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2190-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2191-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2192-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2193-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2194-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2199-6/6-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2241/2463-6/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2241/2464-4/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2241/CTMT-6/55-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2241/CTMT-6/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2241/CTMT-6/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2462/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2464/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2236/2241-6/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2249/2241-30/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2249/2241-30/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2250/2241-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2250/2241-31/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2334/2241-34/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2429/2241-4/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2462/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2241-S01/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2241-S01/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Fire Zone ID:** 2241 - 2241 Main Steam and Feed-water Valve Room

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-STAIR 1/2241-S01/6-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2195/2241-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2195/2241-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2195/2241-6/6-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2251/2241-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2252/2241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2242-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2242-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2243-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2243-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-STAIR 1/2241-S01/6-121 2330	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2242 - 2242 Pipe Chase	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2242/2243-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2242/2243-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2242-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2242-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-006 - Aux Building  
Fire Zone ID: 2243 - 2243 Pipe Chase

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2242/2243-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2242/2243-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2243-6/6-127	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/2243-6/6-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2243/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using performance-based approach Train A MDAFW, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Performance-based-approach Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li> <li>Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"> <li>Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li> <li>Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li> </ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 11, DOEJ-BE-03-9932-001 Documentation of Engineering Judgement in Support of GL 86-10 Evaluation for DCP 2039993201, Reroute B Train CCW Pump 4KV Power Cable Q2P17M001A-B
<b>Inactive</b>	Yes
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the adequacy of the separation for Train A and B of the CCW pumps/raceways valves and the Train A RHR Pump and Pump Room cooler raceways. The pumps/raceways are not separated in accordance with the requirements of Appendix R, Section III.G.2 in that the area of spatial separation is not provided with whole area suppression.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on spatial separation, location of combustibles, limited in situ combustibles, whole area detection with partial suppression, and fire barriers. In addition, administrative controls have been established to maintain the non-suppressed area free of transient combustibles or to establish compensatory actions.</p>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-006 - Aux Building Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Steel equipment hatch covers located in the floor and ceiling of fire area 2-020, room 2234 which form part of fire area boundary with fire areas 2-006, room 2185 and 2-042, room 2345 respectively are not fire-rated.</li> <li>• The steel hatch covers are protected by a suppression system.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-35), Unit 2 Auxiliary Building, Elevations 100, 121, 127, 139, 155 and 175 ft. (Fire Area 2-006), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 12/29/1986 for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating:</p> <p>A non fire-rated, watertight door # 2170 exists between fire area 2-006, room 2190 and fire area 2-S01, Stairwell # 1; and a non fire-rated, pressure tight door # 2330 exists between fire area 2-006, room 2241 and fire area 2-S01, Stairwell # 1.</p> <ul style="list-style-type: none"> <li>• These doors are normally maintained closed. Smoke detection system is provided in rooms on both sides of these doors.</li> <li>• The smoke detection system in rooms 2190 and 2241 alarms locally and are annunciated in the main control room and will provide early warning of a pending fire condition, prompting a fire brigade response. The smoke detection system in stairwell # 1 is provided with only local alarm.</li> <li>• Portable extinguishers and fire hose cabinets are available nearby for fire brigade's use in stairwell # 1.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

Previously Approved Engineering Evaluations

- An automatic fire suppression system is provided in room 2190.
- The combustible loading in room 2241 (main steam valve room) is less than 30 minutes and access to this area during plant operation is restricted. Based on the configuration and fire protection provided, a fire on either side of these doors will not propagate to the adjacent fire area.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-35), Unit 2 Auxiliary Building, Elevations 100, 121, 127, 139, 155 and 175 ft. (Fire Area 2-006), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 12/29/1986, and again on 01/12/1993:

For AFW pump rooms:

- The AFW pump rooms are highly segregated watertight rooms with 2-ft thick reinforced concrete walls and watertight doors that are maintained closed.
- Lubricating oil and cable insulation are the only combustibles present in the pump rooms. Leaking oil would be contained within the individual rooms or would drain into the sump servicing the room.
- The combustible loading of any one pump room is estimated to be less than 30,000 Btu/sq-ft with a maximum fire severity of less than 30 min.
- A smoke detection system is installed in each of the three auxiliary feedwater pump rooms.
- A manual hose station, portable CO2 extinguishers, and portable smoke removal equipment are available.
- The sealed penetrations shall be placed in the surveillance program.

For CCW pump and heat exchanger rooms:

- A smoke detection system is installed throughout the area.
- An automatic sprinkler system is installed over the CCW pumps and in areas where cables are concentrated.
- Low quantity of combustible material with a maximum fire severity of less than 30 minutes.
- A manual hose station, portable CO2 extinguishers, and portable smoke removal equipment are available for use in the area.
- Heat detectors are provided in the 5-kV CCW pump disconnect switch; 5-kV disconnect switch cabinets are provided with a total-flooding Carbon Dioxide system.
- The CCW pump cables are wrapped with two 1-in. layers of Kaowool with the exception of the train-A cables for the swing CCW pump which are wrapped with a single 1-in. layer.
- Cables for the train-B service water inlet and discharge valves on the CCW heat exchangers are protected by two 1-in. layers of Kaowool and covered by automatic suppression.
- Redundant service water valves are separated by a distance of approximately 10 ft. with minimal intervening combustibles consisting primarily of cable insulation.
- The sprinkler system has been modified in order to provide direct unobstructed impingement on the CCW pumps.

For Main Steam Release:

- The combustible loading of the main steam and feedwater valve room (2241) and the plant heating equipment room (2189) is such that the maximum expected fire severity is less than 30 min for each room.

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

Previously Approved Engineering Evaluations

- Room 2241 is a restricted area with limited personnel access during plant operation.
- A smoke detection system is installed throughout both rooms.
- An automatic sprinkler system covers room 2189.
- A manual hose station, portable extinguishers and portable smoke removal equipment are available for use in both rooms.
- Adequate degree of separation is provided between the main steam lines, MSARVs and their associated control cabling in room 2241.
- Manual actions can be performed to regain control of the MSARVs.

For lack of fire detection and suppression in rooms 2242, 2243, 2236, and 2195:

- Rooms 2242, 2243, 2236, and 2195 do not contain any safe shutdown equipment or cabling.

Per the FSAR, exemption request 1-38 provided the following justification for lack of separation and lack of full area smoke detection:

For the AFW pump rooms (per the FSAR):

- Watertight room construction for the Train B pump
- Low quantity of combustible material with a maximum fire severity of less than one hour
- A smoke detection system in the AFW pump room
- The availability of equipment for use by the fire brigade

For the lack of full area smoke detection coverage (per the FSAR):

- Cables in room 2195 are routed in conduits. This room contains no in-situ combustible materials or redundant safe shutdown functions.
- Rooms 2236, 2242, and 2243 do not contain any safe-shutdown equipment, raceways or any in-situ combustible materials.

Elimination of the reliance on Kaowool raceway fire barriers for the CCW system in this area is resolved by DCP 03-2-9925, DCP 03-2-9932, DCP 03-2-9905, and GL 86-10

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

### Licensing Action

Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

### Licensing Basis

Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

## Fire Safety Analysis

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**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

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**Previously Approved Engineering Evaluations**

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.



## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	Modifications: -- DID: Modification required to plumb air from emergency air compressor header to AFW flow control valve -- Risk: Modification to replace trip device in panel Q2R42B0001A, breaker LA20.
2185	2185 Component Cooling Water Heat Exchanger Room	E, D	E, R, D, S, N	E, B	Detection System, 2A-119-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-27-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2118/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2119/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2120/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2121/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2122/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2128/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2129/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2130/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2131/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2228-6/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2229-6/21-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2233-6/21-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2235-6/23-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2236-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2249-6/30-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2250-6/31-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 1/2185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2166/2185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2167/2185-94/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2168/2185-4/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2189/2185-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2190/2185-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 4/2185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2185-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2116/2185-8/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2117/2185-9/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2123/2185-6/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2184/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2185/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2236/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-6-AUX BUILDING-2185-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-27-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2189	2189 Plant Heating Equipment Room	E, D	E, R, D, S, N	E, B	<p>Curbs, U2-6-AUX BUILDING-2199-Curbs:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 2A-102-10:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, 2A-62-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, 2A-62-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-62-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, 2A-62-4:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2189-6/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2190-6/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2193-6/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2194-6/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2199-6/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2189/CTMT-6/55-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2191/2190-6/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2192/2193-6/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2194/CTMT-6/55-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-139:</p>

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2251/2195-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2184/2189-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2191/2194-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2193/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2194/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 4/2190-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/2190-S01/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2189/2185-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2190/2185-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2191/2190-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2191/2199-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2195/2241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2195/2241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2195/2241-6/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2190/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2190	2190 Motor Control Center 2E Room	—	—	E	FireBarrier, U2-FNP-W-2199/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-62-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-6-AUX BUILDING-2190-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2191	2191 Auxiliary Feedwater Pump Room	—	E, R, S	E, B	Detection System, 2A-102-8: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U2-FNP-Ceiling-2241/2191-6/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2191/2190-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2191/2194-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2191/2190-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2191/2199-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2192/2191-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2191/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2192	2192 Auxiliary Feedwater Pump Room	—	E, R, S, N	E, B	Detection System, 2A-102-9: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2192/2241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2241/2192-6/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2192/2193-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2192/2191-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2192/OUTSIDE-6/YARD-100:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-006 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2193	2193 Auxiliary Feedwater Pump Room	—	—	—	—
2194	2194 Equipment Room	—	—	—	—
2195	2195 Access Hatch Room	—	—	—	—
2199	2199 Phosphate Tank and Pump Area	—	—	—	—
2236	2236 Duct Chase	—	—	E, B	FireBarrier, U2-FNP-Ceiling-2185/2236-6/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2236/2236-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2184-1/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2223-6/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2334-6/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2429-6/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2250/2236-31/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2250/2236-31/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2185-1/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2235-6/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2346-6/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2452-6/43-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2241	2241 Main Steam and Feed-water Valve Room	—	E, R, D, S	E, B	<p>FireBarrier, U2-FNP-W-2236/2185-1/6-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2236/2235-6/23-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2236/2346-6/41-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2236/2452-6/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U2-76-NA-76-Restricted transient controls:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Detection System, 2A-106-1:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2192/2241-6/6-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2189-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2190-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2191-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2192-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2193-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2194-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2199-6/6-121:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2463-6/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2464-4/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2241/CTMT-6/55-127:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2241/CTMT-6/55-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2241/CTMT-6/55-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2462/2241-43/6-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2464/2241-43/6-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2236/2241-6/6-121:</p>



## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2236/2241-6/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2249/2241-30/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2249/2241-30/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2250/2241-31/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2250/2241-31/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2334/2241-34/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2429/2241-4/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2462/2241-43/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 4/2241-S01/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/2241-S01/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/2241-S01/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2195/2241-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2195/2241-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2195/2241-6/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2251/2241-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2252/2241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/2242-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/2242-6/6-139: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-006 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2242	2242 Pipe Chase	—	—	E, B	FireBarrier, U2-FNP-W-2241/2243-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/2243-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2243	2243 Pipe Chase	—	—	E, B	FireBarrier, U2-FNP-N-2242/2243-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2242/2243-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/2242-6/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/2242-6/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-008-U1 - Aux Building Cable Chase, Room 2116

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2116-U1	2116 Cable Chase	

## Fire Safety Analysis

**Fire Area ID:** 2-008-U1 - Aux Building Cable Chase, Room 2116  
**Fire Zone ID:** 2116-U1 - 2116 Cable Chase

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-53-1	U2-8 Detection System 2A-53-1 Room 2116	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-55-2	U2-8 Detection System 2A-55-2 Room 2116	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-53-1	Praection Sprinkler System, U2-8, Train A SW Vertical Cable Chase, Room 2116	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2116/2454-8/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2125-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2184-8/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2223-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2334-8/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2169/2116-1/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2110-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2234-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2117/2116-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2120-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2185-8/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-008-U1 - Aux Building Cable Chase, Room 2116	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2116-U1 - 2116 Cable Chase	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2116/2185-8/6-100 2165	0:00,	-	Yes		Yes	-
U2-FNP-W-2116/2335-8/41-139 2319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-8-AUX BUILDING-2116-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-008-U1 - Aux Building Cable Chase, Room 2116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-008-U1 - Aux Building Cable Chase, Room 2116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-008-U1 - Aux Building Cable Chase, Room 2116	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 2-008-U1 - Aux Building Cable Chase, Room 2116 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-5), Unit 2 Auxiliary Building Cable Chase Train A (Fire Area 2-008), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

**Fire Area ID:** 2-008-U1 - Aux Building Cable Chase, Room 2116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2116-U1	2116 Cable Chase	E	E, R, D, S, N	E, B	<p>Detection System, 2A-53-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-55-2:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2116/2454-8/44-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2116/2125-8/1-83:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2116/2184-8/1-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2116/2223-8/1-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2116/2334-8/34-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-N-2169/2116-1/8-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-S-2116/2110-8/1-83:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-S-2116/2234-8/1-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-S-2116/2318-8/40-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-S-2117/2116-9/1-83:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-W-2116/2120-8/1-83:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-W-2116/2185-8/6-100:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-W-2116/2229-8/21-121:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-W-2116/2335-8/41-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>Restricted transient controls, U2-8-AUX BUILDING-2116-Restricted transient controls:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support a fire area boundary evaluation.</li> </ul> <p>Water Suppression, WS-2A-53-1:</p> <ul style="list-style-type: none"> <li>-- EEEE/LA: Required to support a fire area boundary evaluation.</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 2-008-U2 - Aux Building Cable Chase, Room 2116

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2116-U2	2116 Cable Chase	

## Fire Safety Analysis

**Fire Area ID:** 2-008-U2 - Aux Building Cable Chase, Room 2116  
**Fire Zone ID:** 2116-U2 - 2116 Cable Chase

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-53-1	U2-8 Detection System 2A-53-1 Room 2116	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-55-2	U2-8 Detection System 2A-55-2 Room 2116	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-53-1	Preaction Sprinkler System, U2-8, Train A SW Vertical Cable Chase, Room 2116	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2116/2454-8/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2125-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2184-8/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2223-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2334-8/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2169/2116-1/8-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2110-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2234-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2117/2116-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2120-8/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2185-8/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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## Fire Safety Analysis

**Fire Area ID:** 2-008-U2 - Aux Building Cable Chase, Room 2116  
**Fire Zone ID:** 2116-U2 - 2116 Cable Chase

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2116/2185-8/6-100 2165	0:00,	-	Yes		Yes	-
U2-FNP-W-2116/2335-8/41-139 2319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-8-AUX BUILDING-2116-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-8-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-008-U2 - Aux Building Cable Chase, Room 2116  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump aligned to Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using performance-based approach Train B MDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 2-008-U2 - Aux Building Cable Chase, Room 2116

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-008-U2 - Aux Building Cable Chase, Room 2116	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D	Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-008-U2 - Aux Building Cable Chase, Room 2116

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: 2-008-U2 - Aux Building Cable Chase, Room 2116 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-5), Unit 2 Auxiliary Building Cable Chase Train A (Fire Area 2-008), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-008-U2 - Aux Building Cable Chase, Room 2116	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and to replace trip device in panel Q2R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2116-U2	2116 Cable Chase	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 2A-53-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-55-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2116/2454-8/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2116/2125-8/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2116/2184-8/1-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2116/2223-8/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2116/2334-8/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2169/2116-1/8-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2116/2110-8/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2116/2234-8/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2116/2318-8/40-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2117/2116-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2116/2120-8/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2116/2185-8/6-100:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-008-U2 - Aux Building Cable Chase, Room 2116	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2116/2229-8/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2116/2335-8/41-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-8-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-8-AUX BUILDING-2116-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-53-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2117-U1	2117 Cable Chase	
2246-U1	2246 Cable Chase	

## Fire Safety Analysis

**Fire Area ID:** 2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246  
**Fire Zone ID:** 2117-U1 - 2117 Cable Chase

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-55-1	U2-9 Detection System 2A-55-1 Room 2117	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-55-1	Preaction Sprinkler System, U2-9, Non-Rad Aux Building Elevation 100' Cable Chase at Southeast Corner of CCW Pump Room, Room 2117	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2117/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2124-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2184-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2117/2123-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2117/2123-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2117/2116-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2121-9/8-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2185-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246	Systems and Features
Fire Zone ID:	2117-U1 - 2117 Cable Chase	

Fire Doors						
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2117/2185-9/6-100 2167	0:00,	-	Yes		Yes	-
U2-FNP-W-2117/2335-9/41-139 2324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Electrical Raceway Fire Barrier Systems

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Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2246-U1 - 2246 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-55-3	U2-9 Detection System 2A-55-3 Room 2246	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-55-2	Preaction Sprinkler System, U2-9, Non-Rad Aux Building Elevation 100' Cable Chase at Southeast Corner of CCW Pump Room, Room 2246	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2123/2246-1/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2246/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2246/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2246/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2229-9/21-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 22246/2229 and fire areas 9/21	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2335-9/41-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/41	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/0318-12/40-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/40	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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Fire Safety Analysis

Fire Area ID:	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246	Systems and Features
Fire Zone ID:	2246-U1 - 2246 Cable Chase	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2246/2343-9/41-139 2325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Electrical Raceway Fire Barrier Systems

Other Passive Features



## Fire Safety Analysis

**Fire Area ID:** 2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room OR Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room OR Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-19), Unit 2 Train B Inside Cable Chases, Auxiliary Building (Fire Area 2-009), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985, 06/26/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The control cable associated with at least one of the auxiliary feedwater isolation valves has been protected by two 1-in. layers of Kaowool blanket with an overall layer of Zetex fabric or it will be rerouted out of the fire area.</li> <li>• Manual actions can be performed to regain control of a pressurizer PORV and isolate the Train B pressurizer PORV, reactor head vent and pressurizer block valves from a hot shot spurious signal.</li> <li>• Q2P16SV3009-B will be de-energized to ensure it remains in the open position whenever CCW Heat exchanger 2B is aligned and operating as the Train A heat exchanger.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2117-U1	2117 Cable Chase	E, R	E, R, D, S, N	—	<p>Detection System, 2A-55-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2117/2454-9/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2117/2124-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2117/2184-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2117/2334-9/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2117/2123-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2117/2123-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2117/2116-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2121-9/8-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2185-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2335-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-2A-55-1:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p>
2246-U1	2246 Cable Chase	R	E, R, S, N	—	<p>Detection System, 2A-55-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2123/2246-1/9-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2246/2454-9/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2246/2223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U1 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2246/2334-9/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2246/2223-9/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2246/2334-9/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2246/2343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2229-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2254/0318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-55-2: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2117-U2	2117 Cable Chase	
2246-U2	2246 Cable Chase	



## Fire Safety Analysis

**Fire Area ID:** 2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246  
**Fire Zone ID:** 2117-U2 - 2117 Cable Chase

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-55-1	U2-9 Detection System 2A-55-1 Room 2117	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-55-1	Preaction Sprinkler System, U2-9, Non-Rad Aux Building Elevation 100' Cable Chase at Southeast Corner of CCW Pump Room, Room 2117	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2117/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2124-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2184-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2116/2117-8/9-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2117/2123-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2117/2123-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2117/2116-9/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2121-9/8-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2185-9/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2117-U2 - 2117 Cable Chase	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2117/2185-9/6-100 2167	0:00,	-	Yes		Yes	-
U2-FNP-W-2117/2335-9/41-139 2324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VYDG01J	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VYH2C05B-1	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-9-AUX BUILDING-2117-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U2-9-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2246-U2 - 2246 Cable Chase	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-55-3	U2-9 Detection System 2A-55-3 Room 2246	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-55-2	Preaction Sprinkler System, U2-9, Non-Rad Aux Building Elevation 100' Cable Chase at Southeast Corner of CCW Pump Room, Room 2246	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2123/2246-1/9-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2246/2454-9/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2246/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2246/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2223-9/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2229-9/21-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 22246/2229 and fire areas 9/21	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2335-9/41-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/41	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/0318-12/40-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/40	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2246-U2 - 2246 Cable Chase	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2246/2343-9/41-139 2325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VYDG01J	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VYH2C05B-1	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-9-AUX BUILDING-2246-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-
U2-9-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and performance-based approach Train B PORV or block valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring performance-based approach auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Although the sprinkler flow capacity may exceed drainage capacity, all water will drain to the bottom of the chase below elevation 100'. This will not impact the adjacent space or cables in the chase. Fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D	Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-19), Unit 2 Train B Inside Cable Chases, Auxiliary Building (Fire Area 2-009), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985, 06/26/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The control cable associated with at least one of the auxiliary feedwater isolation valves has been protected by two 1-in. layers of Kaowool blanket with an overall layer of Zetex fabric or it will be rerouted out of the fire area.</li> <li>• Manual actions can be performed to regain control of a pressurizer PORV and isolate the Train B pressurizer PORV, reactor head vent and pressurizer block valves from a hot shot spurious signal.</li> <li>• Q2P16SV3009-B will be de-energized to ensure it remains in the open position whenever CCW Heat exchanger 2B is aligned and operating as the Train A heat exchanger.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to wrap cables 2VYH2C05B, 2VYDG01 J with 1 hr fire rated wrap to prevent fire damage due to transient fire and HGL.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2117-U2	2117 Cable Chase	E, R, D	E, R, D, S, N	E, R, D, B	<p>Detection System, 2A-55-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VYDG01J:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VYH2C05B-1:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2117/2454-9/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2117/2124-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2117/2184-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2117/2334-9/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2116/2117-8/9-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2117/2123-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2117/2123-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2117/2116-9/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2121-9/8-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2185-9/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2335-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-9-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U2-9-AUX BUILDING-2117-Restricted</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2246-U2	2246 Cable Chase	R, D	E, R, S, N	R, D, B	<p>transient controls:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-2A-55-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-55-3:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VYDG01J:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VYH2C05B-1:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2123/2246-1/9-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2246/2454-9/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2246/2223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2246/2334-9/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2246/2223-9/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2246/2334-9/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2246/2343-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2233-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2335-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2343-9/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2254/0318-12/40-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-9-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U2-9-AUX BUILDING-2246-Restricted</p> <p>transient controls:</p> <p>-- DID: Required to meet DID criteria.</p> <p>Water Suppression, WS-2A-55-2:</p> <p>-- DID: Required to meet DID criteria.</p>

Fire Safety Analysis

Fire Area ID:	2-009-U2 - Aux Building Cable Chase, Rooms 2117 & 2246	Required Systems and Features
Compliance Basis:	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
-- Risk: Required to meet Risk criteria.					

## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2254	2254 Hallway/Local Hot Shutdown Panel Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-012 - Hallway & Local Hot Shutdown Panel Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2254 - 2254 Hallway/Local Hot Shutdown Panel Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-10	U2-12 Detection System 2A-104-10 Room 2254	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-254/2254-U1-12/U2-12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2254-4/12-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2254/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2254/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2254/2201-12/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2254/2210-12/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2244/2254-20/12-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/2227-13/12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2254/2201-12/14-121: 1-121-115-03	0:00, W. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2254/2201-12/14-121: 1-121-115-04	0:00, W. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-254/2254-U1-12/U2-12-121 201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2254/2210-12/20-121 2209	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Fire Zone ID:** 2254 - 2254 Hallway/Local Hot Shutdown Panel Room

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-12-AUX BUILDING-2254-Plant staff Training	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-12-AUX BUILDING-2254-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump, or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - Performance-based approach RCS pressure is monitored. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2/Loop 3 temperature is monitored. 5. SG Pressure - Performance-based approach Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"><li>• Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li><li>• Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li></ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-012 - Hallway & Local Hot Shutdown Panel Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Engineering Evaluation ID</b>	ENGDOC, DOEJ-SM-03-0415-001    Applicability of NFPA 80 Door Closer Requirements	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation addresses a select number of fire doors that occasionally may not automatically latch closed due to "abnormal air pressure".</p> <p>Bases for Acceptability:</p> <p>The specific fire doors cited are PA101, 201 and 497. The evaluation justifies the door latching deviation by taking credit for plant staff that ensure all fire doors are closed after entry or egress.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M    Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006    Identify Regulatory Fire Barriers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	

## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Summary**

Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-012 - Hallway & Local Hot Shutdown Panel Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Licensing Action** Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

**Licensing Basis** Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 2-012 - Hallway & Local Hot Shutdown Panel Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to install incipient detection and to replace trip device in panel Q2R42B0001B, breaker LB14.
2254	2254 Hallway/Local Hot Shutdown Panel Room	—	E, R, D, S, N	E, D, B	Detection System, 2A-104-10: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-254/2254-U1-12/U2-12-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2151/2254-4/12-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2254/2318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2254/2319-12/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2254/2201-12/14-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2254/2210-12/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2244/2254-20/12-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2254/2227-13/12-121: -- Barrier: Required to support a fire area boundary evaluation. Plant staff Training, U2-12-AUX BUILDING-2254-Plant staff Training: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-12-AUX BUILDING-2254-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2227-U1	2227 Vertical Cable Chase, El. 128'-0"	
2300-U1	2300 Vertical Cable Chase, El. 141'-0"	
2466-U1	2466 Vertical Cable Chase, El. 155'-0"	
2500-U1	2500 Vertical Cable Chase, El. 168'-6"	



## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Fire Zone ID:** 2227-U1 - 2227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-23-2	U2-13 Detection System 2A-23-2 Room 2300	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria. -- rr: Required to meet RR criteria.	Yes	-

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-23-2	Preaction Sprinkler System, U2-13, Vertical Cable Chase, El. 141'-0", Room 2300	-	Yes	-- S: Required to support the use of MI cable.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-300/2300-U1-13/U2-13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2227/227-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Barrier-Ceiling-2300/2466-13/13-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2466/2500-13/13-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2466/2452-13/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2422/2466-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2211/2227-13/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2228/2227-13/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2244/2227-20/13-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/2227-13/12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-412/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-413/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-414/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-472/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2227-U1 - 2227 Vertical Cable Chase, El. 128'-0"	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Barrier-Ceiling-2300/2466-13/13-155: 2-155-123-05	0:00, F. of 2466	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2466/2500-13/13-175: 2-175-125-01	0:00, F. of Roof	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2422/2466-4/4-155 2461	0:00,	-	Yes		Yes	-
U2-FNP-N-474/2466-44/13-155 490	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139 2313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-13-AUX BUILDING-2300-One Hour Rated Cable	-	Yes	-- S: Required to support the NSCA.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	Systems and Features
Fire Zone ID:	2300-U1 - 2300 Vertical Cable Chase, El. 141'-0"	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Fire Zone ID:** 2466-U1 - 2466 Vertical Cable Chase, El. 155'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2500-U1 - 2500 Vertical Cable Chase, El. 168'-6"	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2500/500-U2-13/U1-13-174	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-500/2500-U1-13/U2-13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2466/2500-13/13-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2466/2500-13/13-175: 2-175-125-01	0:00, F. of Roof	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system location of equipment being above water collection area in chase. There are no drains in the electrical chase, but all water would collect below the cable trays. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	



## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C
<b>Inactive</b>	Yes
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.</p> <p>Bases for Acceptability:</p> <p>The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on</p> <ul style="list-style-type: none"><li>• full area detection and suppression;</li><li>• limited fire hazards;</li><li>• an assessment of in situ combustibles; and</li><li>• the substantial construction of the fire area boundary.</li></ul> <p>To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500 NFPA 805, Section 4.2.3 Deterministic Approach	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 2-15), Unit 2 Auxiliary Building Vertical Cable Chase (Fire Area 2-013), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer PORVs.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9906. However, note that the APC correspondence and the NRC SER regarding this exemption request do not take credit for the Kaowool fire barrier.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):</p> <ul style="list-style-type: none"> <li>• The MI cable support span is within the fire test configurations.</li> <li>• The materials for the MI cable supports are bounded by the fire test configurations.</li> <li>• The MI cable installation hardware is in accordance with the fire test configurations.</li> <li>• The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.</li> <li>• The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2227-U1	2227 Vertical Cable Chase, El. 128'-0"	S	E, R, S, N, rr	S, B	<p>Detection System, 2A-23-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>-- Rad. Release: Required to meet RR criteria.</p> <p>FireBarrier, U0-FNP-N-300/2300-U1-13/U2-13-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2227/227-U2-4/U1-4-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Barrier-Ceiling-2300/2466-13/13-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2466/2500-13/13-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2466/2452-13/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2227/OUTSIDE-13/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2300/OUTSIDE-13/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2422/2466-4/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2466/OUTSIDE-13/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-474/2466-44/13-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2211/2227-13/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2227/OUTSIDE-13/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2228/2227-13/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2244/2227-20/13-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2254/2227-13/12-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2300/OUTSIDE-13/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2319/2300-42/13-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2339/2300-42/13-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2466/OUTSIDE-13/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-412/2466-44/13-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-413/2466-44/13-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-414/2466-44/13-155:</p>

## Fire Safety Analysis

**Fire Area ID:** 2-013-U1 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-472/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-474/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U2-13-AUX BUILDING-2300-One Hour Rated Cable: -- Separation: Required to support the NSCA. Water Suppression, WS-2A-23-2: -- Separation: Required to support the use of MI cable.
2300-U1	2300 Vertical Cable Chase, El. 141'-0"	—	—	—	—
2466-U1	2466 Vertical Cable Chase, El. 155'-0"	—	—	—	—
2500-U1	2500 Vertical Cable Chase, El. 168'-6"	—	—	—	FireBarrier, U0-FNP-S-2500/500-U2-13/U1-13-174: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-500/2500-U1-13/U2-13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2466/2500-13/13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2501/2500-51/13-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2227-U2	2227 Vertical Cable Chase, El. 128'-0"	
2300-U2	2300 Vertical Cable Chase, El. 141'-0"	
2466-U2	2466 Vertical Cable Chase, El. 155'-0"	
2500-U2	2500 Vertical Cable Chase, El. 168'-6"	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2227-U2 - 2227 Vertical Cable Chase, El. 128'-0"	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-23-1	U2-13 Detection System 2A-23-1 Room 2227	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-23-2	U2-13 Detection System 2A-23-2 Room 2300	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-23-3	U2-13 Detection System 2A-23-3 Room 2466	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-23-4	U2-13 Detection System 2A-23-4 Room 2500	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-43-2	U2-13 Detection System 2A-43-2 Room 2300	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria. -- rr: Required to meet RR criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-23-1	Preaction Sprinkler System, U2-13, Vertical Cable Chase, El. 128'-0", Room 2227	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-23-2	Preaction Sprinkler System, U2-13, Vertical Cable Chase, El. 141'-0", Room 2300	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to support the use of MI cable.	Yes	-
WS-2A-23-3	Preaction Sprinkler System, U2-13, Vertical Cable Chase, El. 155'-0", Room 2466	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-23-4	Preaction Sprinkler System, U2-13, Vertical Cable Chase, El. 168'-0", Room 2500	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Fire Zone ID:** 2227-U2 - 2227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-300/2300-U1-13/U2-13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2227/227-U2-4/U1-4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Barrier-Ceiling-2300/2466-13/13-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2466/2500-13/13-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2466/2452-13/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2422/2466-4/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2211/2227-13/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2228/2227-13/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2244/2227-20/13-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2254/2227-13/12-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-412/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-413/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-414/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-472/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-474/2466-44/13-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Barrier-Ceiling-2300/2466-13/13-155: 2-155-123-05	0:00, F. of 2466	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2466/2500-13/13-175: 2-175-125-01	0:00, F. of Roof	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2422/2466-4/4-155 2461	0:00,	-	Yes		Yes	-
U2-FNP-N-474/2466-44/13-155 490	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139 2313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Fire Zone ID:** 2227-U2 - 2227 Vertical Cable Chase, El. 128'-0"

### Systems and Features

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-13-AUX BUILDING-2300-One Hour Rated Cable	-	Yes	-- S: Required to support the NSCA.	Yes	-
U2-13-AUX BUILDING-2300-Restricted transient controls	-	-		Yes	-

Fire Safety Analysis

Fire Area ID:	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	Systems and Features
Fire Zone ID:	2300-U2 - 2300 Vertical Cable Chase, El. 141'-0"	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Fire Zone ID:** 2466-U2 - 2466 Vertical Cable Chase, El. 155'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2500-U2 - 2500 Vertical Cable Chase, El. 168'-6"	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2500/500-U2-13/U1-13-174	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-500/2500-U1-13/U2-13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2466/2500-13/13-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2500-51/13-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2466/2500-13/13-175: 2-175-125-01	0:00, F. of Roof	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and performance-based approach Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A/2B. Main feed is performance-based approach isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - Performance-based approach RCS pressure is monitored. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2 temperature is monitored. 5. SG Pressure - Performance-based approach Steam Generator 2A/2B pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 2A/2B level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A.2.4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train AHVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system location of equipment being above water collection area in chase. There are no drains in the electrical chase, but all water would collect below the cable trays. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C
<b>Inactive</b>	Yes
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.</p> <p>Bases for Acceptability:</p> <p>The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on</p> <ul style="list-style-type: none"><li>• full area detection and suppression;</li><li>• limited fire hazards;</li><li>• an assessment of in situ combustibles; and</li><li>• the substantial construction of the fire area boundary.</li></ul> <p>To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 2-15), Unit 2 Auxiliary Building Vertical Cable Chase (Fire Area 2-013), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer PORVs.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9906. However, note that the APC correspondence and the NRC SER regarding this exemption request do not take credit for the Kaowool fire barrier.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):</p> <ul style="list-style-type: none"> <li>• The MI cable support span is within the fire test configurations.</li> <li>• The materials for the MI cable supports are bounded by the fire test configurations.</li> <li>• The MI cable installation hardware is in accordance with the fire test configurations.</li> <li>• The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.</li> <li>• The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Previously Approved Engineering Evaluations**

- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and replace trip device in panel Q2R42B0001B, breaker LB14.
2227-U2	2227 Vertical Cable Chase, El. 128'-0"	R, D, S	E, R, S, N, rr	S, B	Detection System, 2A-23-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-23-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 2A-23-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-23-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, 2A-43-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. FireBarrier, U0-FNP-N-300/2300-U1-13/U2-13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2227/227-U2-4/U1-4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Barrier-Ceiling-2300/2466-13/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2466/2500-13/13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2466/2452-13/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2422/2466-4/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2466/OUTSIDE-13/YARD-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-474/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2211/2227-13/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2228/2227-13/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2244/2227-20/13-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2254/2227-13/12-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2319/2300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/2300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-412/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-413/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-414/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-472/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-474/2466-44/13-155: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U2-13-AUX BUILDING-2300-One Hour Rated Cable: -- Separation: Required to support the NSCA. Water Suppression, WS-2A-23-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-23-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. -- Separation: Required to support the use of MI cable. Water Suppression, WS-2A-23-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-23-4: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-013-U2 - Aux Building Cable Chase, Rooms 2227, 2300, 2466, & 2500	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2300-U2	2300 Vertical Cable Chase, El. 141'-0"	—	—	—	—
2466-U2	2466 Vertical Cable Chase, El. 155'-0"	—	—	—	—
2500-U2	2500 Vertical Cable Chase, El. 168'-6"	—	—	—	FireBarrier, U0-FNP-S-2500/500-U2-13/U1-13-174: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-500/2500-U1-13/U2-13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2466/2500-13/13-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2501/2500-51/13-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-014 - Computer Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2201	2201 Computer Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-014 - Computer Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2201 - 2201 Computer Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-33-1	U2-14 Detection System 2A-33-1 Room 2201	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-33-1	Halon Flooding System system in Fire Area 14 , room number 2201, Computer Room	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2201/201-U2-4/U1-14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2201-4/14-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2201/2318-14/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2201/2202-14/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2254/2201-12/14-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2201/2210-14/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2210/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2244/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2201/201-U2-4/U1-14-121: 1-121-115-06	0:00, S. of 2201	-	Yes		Yes	-
U0-FNP-S-2201/201-U2-4/U1-14-121: 1-121-115-09	0:00, N. of 201	-	Yes		Yes	-
U2-FNP-E-2201/2202-14/15-121: 1-121-115-10	0:00, E. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2201/2202-14/15-121: 1-121-115-41	0:00, W. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2254/2201-12/14-121: 1-121-115-03	0:00, W. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2254/2201-12/14-121: 1-121-115-04	0:00, W. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-014 - Computer Room	Systems and Features
Fire Zone ID:	2201 - 2201 Computer Room	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2201/2210-14/20-121 2208	0:00,	-	Yes		Yes	-

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 2-014 - Computer Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-014 - Computer Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - Performance-based approach RCS pressure is monitored. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Performance-based approach Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-014 - Computer Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C	Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li> <li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-014 - Computer Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-014 - Computer Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Licensing Action** Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

**Licensing Basis** Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 2-014 - Computer Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2201	2201 Computer Room	R, D	E, R, S, N	—	Detection System, 2A-33-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2201/201-U2-4/U1-14-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2151/2201-4/14-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2201/2318-14/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2201/2202-14/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2254/2201-12/14-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2201/2210-14/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2210/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2244/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-2A-33-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-015 - Communication Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2202	2202 Communication Room	

## Fire Safety Analysis

**Fire Area ID:** 2-015 - Communication Room  
**Fire Zone ID:** 2202 - 2202 Communication Room

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-34-1	U2-15 Detection System 2A-34-1 Room 2202	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
Q2H21NBAFP2605A-1	U2-15 Incipient Detection System Q2H21NBAFP2605A Room 2202	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H21NBAFP2605B-1	U2-15 Incipient Detection System Q2H21NBAFP2605B Room 2202	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H21NBAFP2605C-1	U2-15 Incipient Detection System Q2H21NBAFP2605C Room 2202	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes
Q2H21NBAFP2605E-1	U2-15 Incipient Detection System Q2H21NBAFP2605E Room 2202	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	Yes

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-34-1	Halon Flooding System system in Fire Area 15 , room number 2202, Communications Room (contains HSP)	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2202/202-U2-4/U1-15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2151/2202-4/15-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2152/2202-4/15-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2202/2318-15/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2201/2202-14/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2202-20/15-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2202/2203-15/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2202-51/15-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-015 - Communication Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2202 - 2202 Communication Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2202/202-U2-4/U1-15-121: 1-121-115-13	0:00, N. of 202	-	Yes		Yes	-
U0-FNP-S-2202/202-U2-4/U1-15-121: 1-121-115-14	0:00, N. of 202	-	Yes		Yes	-
U2-FNP-E-2201/2202-14/15-121: 1-121-115-10	0:00, E. of 2201	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2201/2202-14/15-121: 1-121-115-41	0:00, W. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121: 2-121-115-21	0:00, N. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121: 2-121-115-22	0:00, N. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121: 2-121-115-23	0:00, S. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2202-51/15-121: 2-121-115-24	0:00, S. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2202/2210-15/20-121 2207	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-15-AUX BUILDING-2202-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-015 - Communication Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by performance-based approach isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump, or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is performance-based approach isolated. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump, or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-015 - Communication Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
	or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2/Loop 3 temperature is monitored. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-015 - Communication Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"><li>• Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li><li>• Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li></ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-015 - Communication Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C	Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li> <li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-015 - Communication Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

		Previously Approved Engineering Evaluations
<b>Fire Area ID:</b>	2-015 - Communication Room	
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-3), Unit 2 Auxiliary Building, Communication Room (Fire Area 2-015), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to to regain the control of one main steam atmospheric relief valve and transfer relays for the pressurizer power operated relief valves (PORV), PORV block valves and head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-015 - Communication Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to install incipient detection and replace trip device in panel Q2R42B0001A, breaker LA20; panel Q2R42B0001B, breaker LB14.
2202	2202 Communication Room	E, R, D	E, R, D, S, N	E, D, B	Detection System, 2A-34-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, Q2H21NBAFP2605A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H21NBAFP2605B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H21NBAFP2605C-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H21NBAFP2605E-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2202/202-U2-4/U1-15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2151/2202-4/15-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2152/2202-4/15-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2202/2318-15/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2201/2202-14/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2202/2210-15/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CHASE2/2202-51/15-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2445/2202-20/15-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2202/2203-15/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-CHASE2/2202-51/15-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-2A-34-1:

## Fire Safety Analysis

**Fire Area ID:** 2-015 - Communication Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-15-AUX BUILDING-2202-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2212	2212 Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-016 - Aux Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2212 - 2212 Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-32-1	U2-16 Detection System 2A-32-1 Room 2212	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2164/2212-4/16-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2212-4/16-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2212/2244-16/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2212/2213-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2212/2210-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2226/2212-19/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2212/2211-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2165/2212-4/16-100: 2-121-115-16	0:00, F. of 2244	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2212/2213-16/20-121: 2-121-115-17	0:00, E. of 2212	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2226/2212-19/16-121: 2-121-115-08	0:00, S. of 2226	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2226/2212-19/16-121: 2-121-115-09	0:00, S. of 2226	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2212/2213-16/20-121 2210	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Fire Zone ID:** 2212 - 2212 Battery Room

**Systems and Features**

### Other Passive Features



## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump, or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

<b>Licensing Action</b>	Appendix R Exemption (No. 2-11), Unit 2 Auxiliary Building Battery Room Train B (Fire Area 2-016), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of the pressurizer power operated relief valves.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-016 - Aux Building Battery Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2212	2212 Battery Room	—	E, R, D	—	Detection System, 2A-32-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2164/2212-4/16-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2165/2212-4/16-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2212/2244-16/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2212/2213-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2212/2210-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2226/2212-19/16-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2212/2211-16/20-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-017 - Aux Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2214	2214 Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-017 - Aux Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2214 - 2214 Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-32-3	U2-17 Detection System 2A-32-3 Room 2214	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2163/2214-4/17-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2214/2245-17/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2209-17/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2215-17/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2214/2210-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2214/2213-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2214/2245-17/20-131: 2-121-115-20	0:00, F. of 2245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2214/2215-17/4-121: 2-121-115-19	0:00, E. of 2214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-12	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-13	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-14	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-15	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2214/2213-17/20-121: 2-121-115-18	0:00, W. of 2214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



Fire Safety Analysis

Fire Area ID:	2-017 - Aux Building Battery Room	Systems and Features
Fire Zone ID:	2214 - 2214 Battery Room	

Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2214/2213-17/20-121 2211	0:00,	-	Yes		Yes	-

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 2-017 - Aux Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump, or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump, or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-017 - Aux Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-017 - Aux Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li> <li>Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-017 - Aux Building Battery Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-017 - Aux Building Battery Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-017 - Aux Building Battery Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-1), Unit 2 Train A Battery Room (Fire Area 2-017), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-017 - Aux Building Battery Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2214	2214 Battery Room	—	E, R, S	—	Detection System, 2A-32-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U2-FNP-Ceiling-2163/2214-4/17-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2214/2245-17/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2214/2209-17/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2214/2215-17/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2214/2210-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2224/2214-18/17-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2214/2213-17/20-121: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2224	2224 dc Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-018 - Aux Building DC Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2224 - 2224 dc Switchgear Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-32-4	U2-18 Detection System 2A-32-4 Room 2224	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2168/2224-4/18-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2169/2224-1/18-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2224/2318-18/40-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2224/2229-18/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2245/2224-20/18-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2224/2225-18/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-STAIR 2/2224-S02/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2224/2229-18/21-121: 2-121-115-06	0:00, S. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2224/2229-18/21-121: 2-121-115-07	0:00, S. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-12	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-13	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-14	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2224/2214-18/17-121: 2-121-115-15	0:00, S. of 2224	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2224/2225-18/20-121: 2-121-115-03	0:00, E. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2224/2225-18/20-121: 2-121-115-05	0:00, E. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-018 - Aux Building DC Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2224 - 2224 dc Switchgear Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2224/2225-18/20-121 2215	0:00,	-	Yes		Yes	Yes

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAHD319	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAID304	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-18-AUX BUILDING-2224-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-18-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"><li>• Unit 2: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li><li>• Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li></ul>	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-018 - Aux Building DC Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-018 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-018 - Aux Building DC Switchgear Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-32), Unit 2 Train A DC Switchgear Room, Auxiliary Building, EI 121 ft (Fire Area 2-018), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-018 - Aux Building DC Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to wrap conduits 2VAHD319 and 2VAID304 with 1 hr fire rated wrap to prevent fire damage due to HGL and provide fuse or other electrical isolation device at the DC shunt connection point.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2224	2224 dc Switchgear Room	—	E, R, D, S, N	E, R, B	<p>Detection System, 2A-32-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VAHD319:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>ERFBS, 2VAID304:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2168/2224-4/18-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2169/2224-1/18-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2224/2318-18/40-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2224/2229-18/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2245/2224-20/18-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2224/2214-18/17-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2224/2225-18/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-STAIR 2/2224-S02/18-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-18-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U2-18-AUX BUILDING-2224-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2226	2226 dc Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-019 - Aux Building DC Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2226 - 2226 dc Switchgear Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-32-6	U2-19 Detection System 2A-32-6 Room 2226	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2166/2226-4/19-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2167/2226-94/19-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2226/2318-19/40-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2226/2225-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2226/2229-19/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2244/2226-20/19-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2226/2212-19/16-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2226/2211-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2226/2225-19/20-121: 2-121-115-02	0:00, W. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2226/2225-19/20-121: 2-121-115-04	0:00, W. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2226/2212-19/16-121: 2-121-115-08	0:00, S. of 2226	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2226/2212-19/16-121: 2-121-115-09	0:00, S. of 2226	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2226/2225-19/20-121 2217	0:00,	-	Yes		Yes	Yes
U2-FNP-W-2226/2211-19/20-121 2218	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-019 - Aux Building DC Switchgear Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2226 - 2226 dc Switchgear Room	

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VCHF263	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-19-AUX BUILDING-2226-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-19-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A/2B. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li> <li>Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-019 - Aux Building DC Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 2-019 - Aux Building DC Switchgear Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

		Previously Approved Engineering Evaluations
<b>Fire Area ID:</b>	2-019 - Aux Building DC Switchgear Room	
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-33), Unit 2 Train B DC Switchgear Room, Auxiliary Building, EI 121 ft (Fire Area 2-019), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li><li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-019 - Aux Building DC Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to wrap conduit 2VCHF263 with 1 hr fire rated wrap and provide fuse or other elec. iso. device at the DC shunt connection pt. and replace trip device in panel Q2R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2226	2226 dc Switchgear Room	—	E, R, D, S, N	E, R, B	<p>Detection System, 2A-32-6:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VCHF263:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2166/2226-4/19-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2167/2226-94/19-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2226/2318-19/40-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2226/2225-19/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2226/2229-19/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2244/2226-20/19-131:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2226/2212-19/16-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2226/2211-19/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-19-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U2-19-AUX BUILDING-2226-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2210	2210 Corridor	
2211	2211 Corridor	
2213	2213 Battery Service Room	
2225	2225 Battery Charger Room	
2228	2228 Corridor	
2234	2234 Hallway	
2244	2244 Roof of Battery 2B Room, El. 131'-0"	
2245	2245 Roof of Battery 2A Room, El. 131'-0"	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2210 - 2210 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A91	Aux.Bldg.-121'-South Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D125	Hose Station - N2V43D125-FZ 20 Room 2234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D126	Hose Station - N2V43D126-FZ 20 Room 2210	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-32-2	U2-20 Detection System 2A-32-2 Room 2213	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-36-1	U2-20 Detection System 2A-36-1 Room 2210	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-36-2	U2-20 Detection System 2A-36-2 Room 2211	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-36-3	U2-20 Detection System 2A-36-3 Room 2228	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-36-4	U2-20 Detection System 2A-36-4 Room 2234	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-36-5	U2-20 Detection System 2A-36-5 Room 2244	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-36-6	U2-20 Detection System 2A-36-6 Room 2245	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Fire Zone ID:** 2210 - 2210 Corridor

### Systems and Features

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-36-1	Precision Sprinkler System, U2-20, Corridor, Room 2210	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-36-2	Precision Sprinkler System, U2-20, Corridor, Room 2211	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-36-3	Precision Sprinkler System, U2-20, Battery Service Room, Room 2213	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-2A-36-4	Precision Sprinkler System, U2-20, Hallway, Room 2234	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-36-5	Precision Sprinkler System, U2-20, Roof of Battery 2B Room, El. 131'-0", Room 2244	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
WS-2A-36-6	Precision Sprinkler System, U2-20, Roof of Battery 2A Room, El. 131'-0", Room 2245	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2152/2210-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2163/2213-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2210-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2164/2213-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2165/2211-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2166/2211-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2228-6/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2210/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2211/2319-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2212/2244-16/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2213/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2214/2245-17/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2225/2213-20/40-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2228/2339-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2234/2345-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2244/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2245/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,1-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,2-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,3-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2212/2213-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2245/2209-20/4-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N,1-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N,2-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2201/2210-14/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2244/2226-20/19-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2245/2224-20/18-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2254/2210-12/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2234-8/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2210/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2212/2210-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2210 - 2210 Corridor	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2214/2210-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2225/2213-20/20-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2244/2201-20/14-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2244/2254-20/12-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2234-S01/20-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2234-S01/20-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2209/2210-4/20-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 2209/2210 and fire areas 4/20	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2211/2227-13/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2212/2211-16/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2214/2213-17/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2226/2211-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2228/2227-13/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2234/OUTSIDE-20/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2244/2227-20/13-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2214/2245-17/20-131: 2-121-115-20	0:00, F. of 2245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,1-2234/2235-20/23-121: 2-121-116-01	0:00, W. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2212/2213-16/20-121: 2-121-115-17	0:00, E. of 2212	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2245/2209-20/4-131: 2-131-115-01	0:00, E. of 2245	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121: 2-121-115-21	0:00, N. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121: 2-121-115-22	0:00, N. of 2202	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2225/2213-20/20-121: 2-121-115-10	0:00, S. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2225/2213-20/20-121: 2-121-115-11	0:00, S. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2214/2213-17/20-121: 2-121-115-18	0:00, W. of 2214	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121: 2-121-115-01	0:00, W. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121: 2-121-116-10	0:00, W. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121: 2-121-116-11	0:00, W. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Fire Zone ID:** 2210 - 2210 Corridor

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E,1-2234/2235-20/23-121 2223	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,3-2234/2235-20/23-121 2224	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2212/2213-16/20-121 2210	0:00,	-	Yes		Yes	-
U2-FNP-N-2201/2210-14/20-121 2208	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2202/2210-15/20-121 2207	0:00,	-	Yes		Yes	-
U2-FNP-N-2254/2210-12/20-121 2209	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2225/2213-20/20-121 2216	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-Elev 4/2234-S01/20-121 Elev. No. 4 (2)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2234-S01/20-121 2225	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2214/2213-17/20-121 2211	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2226/2211-19/20-121 2218	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121 2219	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121 2222	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-20-AUX BUILDING-2210-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-20-AUX BUILDING-2228-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U2-20-AUX BUILDING-2234-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID:	2-020 - Aux Building	Systems and Features
Fire Zone ID:	2211 - 2211 Corridor	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A69	Aux.Bldg.-121'-West Corridor South End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-020 - Aux Building	Systems and Features
Fire Zone ID:	2213 - 2213 Battery Service Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2225 - 2225 Battery Charger Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A70	Aux.Bldg.-121'-D.C. Switchgear 2B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-32-5	U2-20 Detection System 2A-32-5 Room 2225	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2167/2225-94/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2168/2225-4/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2225/2213-20/40-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2226/2225-19/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2113/2225-20/20-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2225/2229-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2225/2213-20/20-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2224/2225-18/20-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2226/2225-19/20-121: 2-121-115-02	0:00, W. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2226/2225-19/20-121: 2-121-115-04	0:00, W. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2225/2213-20/20-121: 2-121-115-10	0:00, S. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2225/2213-20/20-121: 2-121-115-11	0:00, S. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2224/2225-18/20-121: 2-121-115-03	0:00, E. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2224/2225-18/20-121: 2-121-115-05	0:00, E. of 2225	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2225 - 2225 Battery Charger Room	

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2226/2225-19/20-121 2217	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2225/2213-20/20-121 2216	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2224/2225-18/20-121 2215	0:00,	-	Yes		Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-20-AUX BUILDING-2225-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-020 - Aux Building	Systems and Features
Fire Zone ID:	2228 - 2228 Corridor	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	2-020 - Aux Building	Systems and Features
Fire Zone ID:	2234 - 2234 Hallway	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A68	Aux.Bldg.-121'-West Corridor North End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D125	Hose Station - N2V43D125-FZ 20 Room 2234	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-020 - Aux Building  
Fire Zone ID: 2244 - 2244 Roof of Battery 2B Room, El. 131'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

Fire Area ID: 2-020 - Aux Building  
Fire Zone ID: 2245 - 2245 Roof of Battery 2A Room, El. 131'-0"

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>• Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using performance-based approach Train A charging pump or swing charging pump via Train A power.</li> <li>• Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>• Unit 2: RCS inventory is controlled using performance-based approach Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>• Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>• Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>• Unit 1 Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and performance-based approach Pressurizer Heater Group A for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using performance-based approach Train A MDAFW pump or TDAFW pump supplying Steam Generator 2B. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 2. 4. RCS Temperature - Performance-based approach RCS Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li> <li>Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"> <li>Unit 2: Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li> <li>Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li> </ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 9, TE-BE-03-9903-001 Technical Evaluation in Support of GL 86-10 for DCP 03-2-9903, Upgrade Unit 2 Mezzanine Floor in Fire Area 2-020
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<b>Inactive</b>	Yes
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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The purpose of the evaluation is to assess the adequacy of the separation for redundant trains of SSD equipment. The raceways are not separated in accordance with the requirements of Appendix R, Section III.G.2 in that the area of spatial separation is not provided with whole area suppression.

Bases for Acceptability:

The acceptability of the evaluation is based on spatial separation, location of combustibles, limited in situ combustibles, whole area detection with partial suppression, and fire barriers. In addition, administrative controls have been established to maintain the non-suppressed area free of transient combustibles or to establish compensatory actions.

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: 2-020 - Aux Building Compliance Basis: Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 2233 (area 2-021) and 2228 (area 2-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-14), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 2235 (area 2-023) and 2234 (area 2-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-020 - Aux Building Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve, the pressurizer power operated relief valves and the transfer relays for the pressurizer power operated relief valves and block valves, and to determine CST level.</li> <li>• The cables for the Train-A pumps and pump room coolers, and the swing pumps and pump room coolers, are protected with raceway fire barriers.</li> <li>• The portions of fire area 2-020 that are not covered by an automatic suppression system do not contain redundant safe shutdown cable or equipment.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9905, DCP 03-2-9925, DCP 03-2-9903 and GL 86-10 evaluation.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"> <li>• The door/transom assemblies separating rooms 2233 (Fire Area 2-021) and 2228 (Fire Area 2-020), and rooms 2235 (Fire Area 2-023) and 2234 (Fire Area 2-020), have been certified by the vendor as being constructed of materials and in a manner similar to that of the UL Class A criteria.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Steel equipment hatch covers located in the floor and ceiling of fire area 2-020, room 2234 which form part of fire area boundary with fire areas 2-006, room 2185 and 2-042, room 2345 respectively are not fire-rated.</li> <li>• The steel hatch covers are protected by a suppression system.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Licensing Action** Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

**Licensing Basis** Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and replace trip device in panel Q2R42B0001A, breaker LA20; Q2R42B0001B, breaker LB07, LB14.</p>
2210	2210 Corridor	E, R, D	E, R, D, S, N	E, D, B	<p>Detection System, 2A-32-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-36-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-36-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-36-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-36-4:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-36-5:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-36-6:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2152/2210-4/20-100:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2163/2213-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2210-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2164/2213-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2165/2211-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2166/2211-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2185/2228-6/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2210/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2211/2319-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2212/2244-16/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2213/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2214/2245-17/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2225/2213-20/40-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2228/2339-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2234/2345-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2244/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2245/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E,1-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E,2-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E,3-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2212/2213-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2245/2209-20/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N,1-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N,2-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-2201/2210-14/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2202/2210-15/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2244/2226-20/19-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2245/2224-20/18-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2254/2210-12/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2116/2234-8/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2210/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2212/2210-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2214/2210-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2225/2213-20/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2244/2201-20/14-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2244/2254-20/12-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 4/2234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2209/2210-4/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2211/2227-13/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2212/2211-16/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2214/2213-17/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2226/2211-19/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2228/2227-13/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2229/2228-20/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2233/2228-20/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2234/OUTSIDE-20/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2244/2227-20/13-131:

## Fire Safety Analysis

**Fire Area ID:** 2-020 - Aux Building  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-20-AUX BUILDING-2210-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-20-AUX BUILDING-2228-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-20-AUX BUILDING-2234-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-36-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-36-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-36-3: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-36-4: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-36-5: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-36-6: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria.
2211	2211 Corridor	—	—	—	—
2213	2213 Battery Service Room	—	—	—	—
2225	2225 Battery Charger Room	—	E, R, D, S, N	E, D, B	Detection System, 2A-32-5: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2167/2225-94/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2168/2225-4/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2225/2213-20/40-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2226/2225-19/20-121:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-020 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2113/2225-20/20-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2225/2229-20/21-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2225/2213-20/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2224/2225-18/20-121: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-20-AUX BUILDING-2225-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
2228	2228 Corridor	—	—	—	—
2234	2234 Hallway	—	—	—	—
2244	2244 Roof of Battery 2B Room, El. 131'-0"	—	—	—	—
2245	2245 Roof of Battery 2A Room, El. 131'-0"	—	—	—	—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2229-U1	2229 Switchgear Room	
2233-U1	2233 Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2229-U1 - 2229 Switchgear Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-7	U2-21 Detection System 2A-104-7 Room 2229	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-104-8	U2-21 Detection System 2A-104-8 Room 2233	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-30-1	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2F	-	Yes		Yes	-
GS-2A-30-2	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2B	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2229-6/21-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2233-6/21-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2229/2335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2233/2343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2224/2229-18/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2225/2229-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2226/2229-19/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2223/2233-1/21-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2229-9/21-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 22246/2229 and fire areas 9/21	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2229-U1 - 2229 Switchgear Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2224/2229-18/21-121: 2-121-115-06	0:00, S. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2224/2229-18/21-121: 2-121-115-07	0:00, S. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-06	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-07	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-08	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-09	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121: 2-121-115-01	0:00, W. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121: 2-121-116-10	0:00, W. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121: 2-121-116-11	0:00, W. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2235/2233-21/23-121 2227	0:00,	-	Yes		Yes	-
U2-FNP-W-2229/2228-20/21-121 2219	0:00,	-	Yes		Yes	-
U2-FNP-W-2233/2228-20/21-121 2222	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-21-AUX BUILDING-2233-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-021-U1 - Aux Building Switchgear Rooms	Systems and Features
Fire Zone ID:	2233-U1 - 2233 Switchgear Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-021-U1 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-021-U1 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>	



## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-021-U1 - Aux Building Switchgear Rooms NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain normal control of the service water system.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 2233 (area 2-021) and 2228 (area 2-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"><li>• The door/transom assemblies separating rooms 2233 (Fire Area 2-021) and 2228 (Fire Area 2-020), and rooms 2235 (Fire Area 2-023) and 2234 (Fire Area 2-020), have been certified by the vendor as being constructed of materials and in a manner similar to that of the UL Class A criteria.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U1 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2229-U1	2229 Switchgear Room	—	E, R, D, S, N	E, B	<p>Detection System, 2A-104-7:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-104-8:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2229-6/21-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2233-6/21-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2229/2335-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2233/2343-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2224/2229-18/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2225/2229-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2226/2229-19/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2235/2233-21/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2116/2229-8/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2223/2233-1/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2229/2228-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2233/2228-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2233-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Restricted transient controls, U2-21-AUX BUILDING-2233-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>
2233-U1	2233 Switchgear Room	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2229-U2	2229 Switchgear Room	
2233-U2	2233 Switchgear Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2229-U2 - 2229 Switchgear Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-104-7	U2-21 Detection System 2A-104-7 Room 2229	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-104-8	U2-21 Detection System 2A-104-8 Room 2233	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-30-1	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2F	-	Yes		Yes	-
GS-2A-30-2	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2B	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2229-6/21-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2185/2233-6/21-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2229/2335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2233/2343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2224/2229-18/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2225/2229-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2226/2229-19/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2229-8/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2229-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2223/2233-1/21-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2229-9/21-121	3:00, , U2 3 hr. Rated Barrier at ele 121 between Rooms 22246/2229 and fire areas 9/21	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2233-9/21-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2229-U2 - 2229 Switchgear Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2224/2229-18/21-121: 2-121-115-06	0:00, S. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2224/2229-18/21-121: 2-121-115-07	0:00, S. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-06	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-07	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-08	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-09	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2229/2228-20/21-121: 2-121-115-01	0:00, W. of 2229	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121: 2-121-116-10	0:00, W. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2233/2228-20/21-121: 2-121-116-11	0:00, W. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2235/2233-21/23-121 2227	0:00,	-	Yes		Yes	-
U2-FNP-W-2229/2228-20/21-121 2219	0:00,	-	Yes		Yes	-
U2-FNP-W-2233/2228-20/21-121 2222	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VYH2C05B-2	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-21-AUX BUILDING-2233-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-21-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-021-U2 - Aux Building Switchgear Rooms	Systems and Features
Fire Zone ID:	2233-U2 - 2233 Switchgear Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-021-U2 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach aux spray for pressure reduction and performance-based approach Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by of diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	



## Fire Safety Analysis

**Fire Area ID:** 2-021-U2 - Aux Building Switchgear Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond Or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B	Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 2-021-U2 - Aux Building Switchgear Rooms Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain normal control of the service water system.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

Fire Area ID: 2-021-U2 - Aux Building Switchgear Rooms Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 2-10), Unit 2 Auxiliary Building Switchgear Room Train B (Fire Area 2-021), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 2233 (area 2-021) and 2228 (area 2-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"><li>• The door/transom assemblies separating rooms 2233 (Fire Area 2-021) and 2228 (Fire Area 2-020), and rooms 2235 (Fire Area 2-023) and 2234 (Fire Area 2-020), have been certified by the vendor as being constructed of materials and in a manner similar to that of the UL Class A criteria.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to wrap cable 2VYH2C05B, install interposing relay and fuse to protect cable 2VYDG15 J and to replace trip device in panel Q2R42B0001A, breaker LA13; Q2R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2229-U2	2229 Switchgear Room	—	E, R, D, S, N	E, R, B	<p>Detection System, 2A-104-7:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-104-8:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VYH2C05B-2:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2229-6/21-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2233-6/21-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2229/2335-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2233/2343-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2224/2229-18/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2225/2229-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2226/2229-19/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2235/2233-21/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2116/2229-8/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2117/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2223/2233-1/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2229/2228-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2233/2228-20/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2246/2229-9/21-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-021-U2 - Aux Building Switchgear Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2233-U2	2233 Switchgear Room	—	—	—	FireBarrier, U2-FNP-W-2246/2233-9/21-121: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-21-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-21-AUX BUILDING-2233-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U1 - Aux Building Switchgear Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2235-U1	2235 Switchgear Room	



## Fire Safety Analysis

**Fire Area ID:** 2-023-U1 - Aux Building Switchgear Room  
**Fire Zone ID:** 2235-U1 - 2235 Switchgear Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-31-1	U2-23 Detection System 2A-31-1 Room 2235	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-28-1	Local CO2 system in Fire Area 21 , room number 2229, 4160V Swgr 2G	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes
GS-2A-28-2	Local CO2 system in Fire Area 21 , room number 2233, Station Service Trans. 2F 4KV Disc. SW 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-30-1	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-30-2	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-31-1	Halon Flooding Suppression system in Fire Area 23 , room number 2235, CRDM Control System Cabinets Room	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes
GS-2A-37-1	Local CO2 system in Fire Area 41 , room number 2346, 600V Load Center 2I	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-38-1	Local CO2 system in Fire Area 14 , room number 2346, 4160V Swgr 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-40-1	Local CO2 system in Fire Area 41 , room number 2335, 4160V Swgr Bus 2F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-40-2	Local CO2 system in Fire Area 41 , room number 2343, Station Service Trans. 2F 4KV Disc. SW 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-41-1	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2D	-	Yes		Yes	-
GS-2A-41-2	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-42-1	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-42-2	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-023-U1 - Aux Building Switchgear Room  
**Fire Zone ID:** 2235-U1 - 2235 Switchgear Room

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2235-6/23-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2235/2346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,1-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,2-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,3-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2235/2223-23/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N,1-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N,2-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2235-23/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2235/2346-23/41-139: 2-121-116-12	0:00, C. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,1-2234/2235-20/23-121: 2-121-116-01	0:00, W. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-06	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-07	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-08	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-09	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2235-6/23-121: 2-121-116-05	0:00, N. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-02	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-03	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-04	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E,1-2234/2235-20/23-121 2223	0:00,	-	Yes		Yes	-
U2-FNP-E,3-2234/2235-20/23-121 2224	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121 2227	0:00,	-	Yes		Yes	-
U2-FNP-S-2249/2235-23/30-121 2241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2235-31/23-121 2240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-023-U1 - Aux Building Switchgear Room	Systems and Features
Fire Zone ID:	2235-U1 - 2235 Switchgear Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-23-AUX BUILDING-2235-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-023-U1 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room OR Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room OR Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-023-U1 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b> 2-023-U1 - Aux Building Switchgear Room <b>Compliance Basis:</b> NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		<b>Engineering Evaluations</b>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li> <li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U1 - Aux Building Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-023-U1 - Aux Building Switchgear Room NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-11), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain normal control of the service water system.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-14), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

Fire Area ID: 2-023-U1 - Aux Building Switchgear Room Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 2-14), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 2235 (area 2-023) and 2234 (area 2-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"><li>• The door/transom assemblies separating rooms 2233 (Fire Area 2-021) and 2228 (Fire Area 2-020), and rooms 2235 (Fire Area 2-023) and 2234 (Fire Area 2-020), have been certified by the vendor as being constructed of materials and in a manner similar to that of the UL Class A criteria.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U1 - Aux Building Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2235-U1	2235 Switchgear Room	E, R	E, R, D, S	E, B	<p>Detection System, 2A-31-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2235-6/23-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2235/2346-23/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E,1-2234/2235-20/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E,2-2234/2235-20/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E,3-2234/2235-20/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2235/2223-23/1-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N,1-2234/2235-20/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N,2-2234/2235-20/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2235/2233-21/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2236/2235-6/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2249/2235-23/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2250/2235-31/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-STAIR 1/2235-S01/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2236/2235-6/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Gaseous Suppression, GS-2A-28-1:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-2A-28-2:</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-2A-30-1:</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-2A-30-2:</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-2A-31-1:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Gaseous Suppression, GS-2A-37-1:</p> <p>-- EEEE/LA: Required to meet EEEE criteria.</p> <p>-- Risk: Required to meet Risk criteria.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U1 - Aux Building Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Gaseous Suppression, GS-2A-38-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-41-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-23-AUX BUILDING-2235-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U2 - Aux Building Switchgear Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2235-U2	2235 Switchgear Room	

## Fire Safety Analysis

**Fire Area ID:** 2-023-U2 - Aux Building Switchgear Room  
**Fire Zone ID:** 2235-U2 - 2235 Switchgear Room

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-31-1	U2-23 Detection System 2A-31-1 Room 2235	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	Yes

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-28-1	Local CO2 system in Fire Area 21 , room number 2229, 4160V Swgr 2G	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes
GS-2A-28-2	Local CO2 system in Fire Area 21 , room number 2233, Station Service Trans. 2F 4KV Disc. SW 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-29-1	Local CO2 system in Fire Area 21 , room number 2229, 600V Load Center 2C	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes
GS-2A-29-2	Local CO2 system in Fire Area 21 , room number 2229, 600V Load Center 2E	-	Yes	-- R: Required to meet Risk criteria.	Yes	Yes
GS-2A-30-1	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-30-2	Local CO2 system in Fire Area 21 , room number 2233, 600V Load Center 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-31-1	Halon Flooding Suppression system in Fire Area 23 , room number 2235, CRDM Control System Cabinets Room	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	Yes
GS-2A-37-1	Local CO2 system in Fire Area 41 , room number 2346, 600V Load Center 2I	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-38-1	Local CO2 system in Fire Area 14 , room number 2346, 4160V Swgr 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-40-1	Local CO2 system in Fire Area 41 , room number 2335, 4160V Swgr Bus 2F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-40-2	Local CO2 system in Fire Area 41 , room number 2343, Station Service Trans. 2F 4KV Disc. SW 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-41-1	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2D	-	Yes		Yes	-
GS-2A-41-2	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-42-1	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-
GS-2A-42-2	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-023-U2 - Aux Building Switchgear Room  
**Fire Zone ID:** 2235-U2 - 2235 Switchgear Room

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2235-6/23-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2235/2346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,1-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,2-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,3-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2235/2223-23/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N,1-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N,2-2234/2235-20/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2235-23/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2235/2346-23/41-139: 2-121-116-12	0:00, C. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E,1-2234/2235-20/23-121: 2-121-116-01	0:00, W. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-06	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-07	0:00, S. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-08	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121: 2-121-116-09	0:00, N. of 2233	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2235-6/23-121: 2-121-116-05	0:00, N. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-02	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-03	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2235-6/23-121: 2-121-116-04	0:00, E. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E,1-2234/2235-20/23-121 2223	0:00,	-	Yes		Yes	-
U2-FNP-E,3-2234/2235-20/23-121 2224	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2235/2233-21/23-121 2227	0:00,	-	Yes		Yes	-
U2-FNP-S-2249/2235-23/30-121 2241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2235-31/23-121 2240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-023-U2 - Aux Building Switchgear Room	Systems and Features
Fire Zone ID:	2235-U2 - 2235 Switchgear Room	

Electrical Raceway Fire Barrier Systems

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Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-23-AUX BUILDING-2235-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-023-U2 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV or aux spray} for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2B. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 2-023-U2 - Aux Building Switchgear Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b> 2-023-U2 - Aux Building Switchgear Room <b>Compliance Basis:</b> NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		<b>Engineering Evaluations</b>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment C Code Compliance Evaluation for NFPA 12A, 2004 Edition, Halon 1301 Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12A, 2004 Edition and NFPA 12A, 1973 Edition. The approach was to determine the applicable code editions for the Halon 1301 systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable code editions</li> <li>• The Halon systems were determined to be compliant with the relevant sections of NFPA-12A-2004 and NFPA 12A-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances in against the 2004 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U2 - Aux Building Switchgear Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 2-023-U2 - Aux Building Switchgear Room Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-11), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain normal control of the service water system.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-14), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

Fire Area ID: 2-023-U2 - Aux Building Switchgear Room Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 2-14), Unit 2 Auxiliary Building CRDM Switchgear Room (Fire Area 2-023), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Based on the construction, the installation of the door/transom assembly between rooms 2235 (area 2-023) and 2234 (area 2-020), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985: .</p> <ul style="list-style-type: none"><li>• The door/transom assemblies separating rooms 2233 (Fire Area 2-021) and 2228 (Fire Area 2-020), and rooms 2235 (Fire Area 2-023) and 2234 (Fire Area 2-020), have been certified by the vendor as being constructed of materials and in a manner similar to that of the UL Class A criteria.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U2 - Aux Building Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to replace trip device in panel Q2R42B0001A, breaker LA13; Q2R42B0001B, breakers LB07, LB14.
2235-U2	2235 Switchgear Room	E, R	E, R, D, S	E, B	Detection System, 2A-31-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U2-FNP-Ceiling-2185/2235-6/23-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2235/2346-23/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E,1-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E,2-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E,3-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2235/2223-23/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N,1-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N,2-2234/2235-20/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2235/2233-21/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2235-6/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2249/2235-23/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2250/2235-31/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2235-S01/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2236/2235-6/23-121: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-2A-28-1: -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-28-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-29-1: -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-29-2: -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-30-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-023-U2 - Aux Building Switchgear Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Gaseous Suppression, GS-2A-30-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-31-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-37-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-38-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-41-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-1: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-2: -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-23-AUX BUILDING-2235-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2249-U1	2249 Cable Chase	
2252-U1	2252 Cable Chase	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2249-U1 - 2249 Cable Chase	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-60-2	U2-30 Detection System 2A-60-2 Room 2249	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-60-1	Preaction Sprinkler System, U2-30, Non-Rad Aux Building Elevation 100' Vertical Cable Chase to Diesel Building B, Room 2249	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2249/2250-30/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2249/2250-30/31-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-STAIR 1/2249-S01/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2249-S01/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2249/2241-30/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2249/2241-30/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2235-23/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2249/2235-23/30-121 2241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID: 2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252  
Fire Zone ID: 2249-U1 - 2249 Cable Chase

Systems and Features

Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2252-U1 - 2252 Cable Chase	

### Extinguishers

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### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-60-1	U2-30 Detection System 2A-60-1 Room 2252	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-60-2	Preaction Sprinkler System, U2-30, Non-Rad Aux Building Elevation 100' Vertical Cable Chase to Diesel Building B, Room 2252	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2252/2251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2252/2241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have been provided with justifications</li> </ul>

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

## Fire Safety Analysis

**Fire Area ID:** 2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-12), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The fire-resistant coatings on the watertight door between auxiliary building (area 2-030) and cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-9), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain normal control of the service water system.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252 NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-9), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between auxiliary building (Fire Area 2-030) and cable tunnel (Fire Area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries either have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-25), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-25), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-26), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in letters dated 11/19/1985 and 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between the auxiliary auildng (area 2-030) and the cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U1 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2249-U1	2249 Cable Chase	E	E, R, D, S, N	—	Detection System, 2A-60-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2185/2249-6/30-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2249/2250-30/31-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2249/2250-30/31-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 1/2249-S01/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 1/2249-S01/30-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2249/2241-30/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2249/2241-30/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2249/2235-23/30-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2249/2346-30/41-139: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-60-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2252-U1	2252 Cable Chase	E	E, R, D, S, N	—	Detection System, 2A-60-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2252/2251-30/31-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2252/2241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-60-2: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2249-U2	2249 Cable Chase	
2252-U2	2252 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2249-U2 - 2249 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-60-2	U2-30 Detection System 2A-60-2 Room 2249	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-60-1	Preaction Sprinkler System, U2-30, Non-Rad Aux Building Elevation 100' Vertical Cable Chase to Diesel Building B, Room 2249	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2249-6/30-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2249/2250-30/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2249/2250-30/31-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-STAIR 1/2249-S01/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2249-S01/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2249/2241-30/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2249/2241-30/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2235-23/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2249/2235-23/30-121 2241	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	Systems and Features
Fire Zone ID:	2249-U2 - 2249 Cable Chase	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-30-AUX BUILDING-2249-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-30-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2252-U2 - 2252 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-60-1	U2-30 Detection System 2A-60-1 Room 2252	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-60-2	Preaction Sprinkler System, U2-30, Non-Rad Aux Building Elevation 100' Vertical Cable Chase to Diesel Building B, Room 2252	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2252/2251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2252/2241-30/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-30-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	

## Fire Safety Analysis

**Fire Area ID:** 2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-12), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The fire-resistant coatings on the watertight door between auxiliary building (area 2-030) and cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 1-9), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain normal control of the service water system.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

Fire Area ID: 2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-9), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between auxiliary building (Fire Area 2-030) and cable tunnel (Fire Area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries either have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-25), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-25), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-26), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in letters dated 11/19/1985 and 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between the auxiliary aulidng (area 2-030) and the cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q2R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2249-U2	2249 Cable Chase	E, D	E, R, D, S, N	E, R, B	<p>Detection System, 2A-60-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2249-6/30-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2249/2250-30/31-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2249/2250-30/31-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2249-S01/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2249-S01/30-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2249/2241-30/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2249/2241-30/6-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2249/2235-23/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2249/2346-30/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-30-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U2-30-AUX BUILDING-2249-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-2A-60-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-030-U2 - Aux Building Cable Chase, Rooms 2249 & 2252	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2252-U2	2252 Cable Chase	E, D	E, R, D, S, N	R, B	Detection System, 2A-60-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2252/2251-30/31-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2252/2241-30/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-30-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-60-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2250-U1	2250 Cable Chase	
2251-U1	2251 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2250-U1 - 2250 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-61-2	U2-31 Detection System 2A-61-2 Room 2250	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-61-1	Preaction Sprinkler System, U2-31, Non-Rad Aux Building Elevation 100' Vertical Cable Chase to Diesel Building A, Room 2250	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2250-6/31-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2249/2250-30/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2249/2250-30/31-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2250/2236-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2250/2236-31/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2250/2241-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2250/2241-31/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2346-31/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2250/2235-31/23-121 2240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—



Fire Safety Analysis

Fire Area ID:	2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251	Systems and Features
Fire Zone ID:	2250-U1 - 2250 Cable Chase	

Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2251-U1 - 2251 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-61-1	U2-31 Detection System 2A-61-1 Room 2251	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-61-2	Preaction Sprinkler System, U2-31, Elevation 100' Vertical Cable Chase to Diesel Building A, Room 2251	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2251/2195-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2252/2251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2251/2241-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room OR Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room OR Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment G	Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have been provided with justifications</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-7), Unit 2 Auxiliary Building Cable Chase Train A (Fire Area 2-031 Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-21), Unit 2 Auxiliary Building Cable Chase Train A (Fire Area 2-031), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main stream atmospheric relief valve and those actions necessary to monitor boron concentration utilizing the RCS sampling system.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-24), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U1 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2250-U1	2250 Cable Chase	—	E, R, S, N	—	Detection System, 2A-61-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2185/2250-6/31-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2249/2250-30/31-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2249/2250-30/31-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2250/2236-31/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2250/2236-31/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2250/2241-31/6-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2250/2241-31/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2250/2235-31/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2250/2346-31/41-139: -- Barrier: Required to support a fire area boundary evaluation.
2251-U1	2251 Cable Chase	—	E, R, D, S, N	—	Detection System, 2A-61-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2251/2195-31/6-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2252/2251-30/31-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2251/2241-31/6-127: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
2250-U2	2250 Cable Chase	
2251-U2	2251 Cable Chase	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2250-U2 - 2250 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-61-2	U2-31 Detection System 2A-61-2 Room 2250	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-61-1	Preaction Sprinkler System, U2-31, Non-Rad Aux Building Elevation 100' Vertical Cable Chase to Diesel Building A, Room 2250	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2185/2250-6/31-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2249/2250-30/31-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2249/2250-30/31-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2250/2236-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2250/2236-31/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2250/2241-31/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2250/2241-31/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2235-31/23-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2346-31/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2250/2235-31/23-121 2240	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251	Systems and Features
Fire Zone ID:	2250-U2 - 2250 Cable Chase	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-31-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2251-U2 - 2251 Cable Chase	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-61-1	U2-31 Detection System 2A-61-1 Room 2251	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-61-2	Preaction Sprinkler System, U2-31, Elevation 100' Vertical Cable Chase to Diesel Building A, Room 2251	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2251/2195-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2252/2251-30/31-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2251/2241-31/6-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-31-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251

**Engineering Evaluations**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

Fire Area ID: 2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251 Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-7), Unit 2 Auxiliary Building Cable Chase Train A (Fire Area 2-031 Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-21), Unit 2 Auxiliary Building Cable Chase Train A (Fire Area 2-031), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main stream atmospheric relief valve and those actions necessary to monitor boron concentration utilizing the RCS sampling system.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-24), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q2R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2250-U2	2250 Cable Chase	D	E, R, S, N	R, B	<p>Detection System, 2A-61-2:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2185/2250-6/31-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2249/2250-30/31-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2249/2250-30/31-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2250/2236-31/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2250/2236-31/6-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2250/2241-31/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2250/2241-31/6-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2250/2235-31/23-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2250/2346-31/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-31-AUX BUILDING-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Water Suppression, WS-2A-61-1:</p> <p>-- DID: Required to meet DID criteria.</p>
2251-U2	2251 Cable Chase	E, D	E, R, D, S, N	R, B	<p>Detection System, 2A-61-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2251/2195-31/6-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2252/2251-30/31-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2251/2241-31/6-127:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-031-U2 - Aux Building Cable Chase, Rooms 2250 & 2251

**Required Systems and Features**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					Procedures/Recovery Actions, U2-31-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-61-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2317	2317 Penetration Room Filtration System Equipment Room	
2334	2334 Electrical Penetration Room, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2317 - 2317 Penetration Room Filtration System Equipment Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-48-4	U2-34 Detection System 2A-48-4 Room 2317	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2317/317-U2-34/U1-34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2203/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2204/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2209/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2317/2402-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2317/2403-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2317/2409-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2317/2410A-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2317/2316-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2501/2317-51/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2317/2322-34/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2215/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2317/2318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2403/2317-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2317/2316-4/34-139: 2-139-118-03	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2317/2322-34/4-139: 2-139-118-02	0:00, N. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2317-4/34-139: 2-139-118-04	0:00, S. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2403/2317-4/34-139: 2-139-118-05	0:00, S. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2215/2317-4/34-139: 2-139-118-01	0:00, N. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2317/2318-34/40-139: 2-139-118-08	0:00, W. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2317 - 2317 Penetration Room Filtration System Equipment Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2317/2318-34/40-139: 2-139-118-09	0:00, W. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2403/2317-4/34-139: 2-139-118-06	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2403/2317-4/34-139: 2-139-118-07	0:00, E. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2317/2322-34/4-139 2311	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2334 - 2334 Electrical Penetration Room, Train B	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D117	Hose Station - N2V43D117-FZ 34 Room 2334	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-46-1	U2-34 Detection System 2A-46-1 Room 2334	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2223/2334-1/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2409-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2429-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2116/2334-8/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2117/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2236/2334-6/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2246/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2334/2333-34/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2343/2334-41/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2346/2334-41/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2334-9/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2321/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2322/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2323/2334-4/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2334/2241-34/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2334/CTMT-34/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2334-S02/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2223/2334-1/34-139: 2-139-119-10	0:00, F. of 2334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2334-1/34-139: 2-139-119-12	0:00, F. of 2334	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2334-1/34-139: 2-139-120-01	0:00, F. of 2324	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2334/2429-34/4-155: 2-155-119-11	0:00, F. of 2429	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2334 - 2334 Electrical Penetration Room, Train B	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2334/2333-34/35-139: 2-139-120-02	0:00, E. of 2324	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2334/2333-34/35-139 2318	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2322/2334-4/34-139 2317	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2322/2334-4/34-139 2317A	0:00,	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-34-AUX BUILDING-2334-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump, or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is isolated using orifice isolation valves. Excess letdown is performance-based approach isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and performance-based approach Train B PORV or block valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR outboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by performance-based approach ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A/2B. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-034 - Train B Electrical Pen Room & Filtration System  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"> <li>Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li> <li>Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li> </ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

<b>Licensing Action</b>	Appendix R Exemption (No. 2-18), Unit 2 Aux. Building, Electrical Pen. Rm Tr. B, and Pen. Room Filtration System Equip. Rm (Fire Area 2-034), Enclosure of one train by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain charging pump miniflow, establish reactor coolant pump seal injection, isolation of RCS and pressurizer sample lines, control of a main steam atmospheric relief valve, regain control of pressurizer PORV and reactor head vent valves and initiating RCS charging through the boron injection tank.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> <li>• A modification has been completed to install disconnect switches outside the electrical penetration room.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to seal elec. pen. cabinets 2G and 2F, MCC 2V, 2B H2 Analyzer, transfer relay cabinet, and power supply panel and to replace trip device in panel Q2R42B0001A, breakers LA08 and LA20.
2317	2317 Penetration Room Filtration System Equipment Room	—	E, R, S	—	Detection System, 2A-48-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2317/317-U2-34/U1-34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2203/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2204/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2209/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2402-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2403-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2409-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2317/2410A-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2317/2316-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2501/2317-51/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2317/2322-34/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2403/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2215/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2317/2318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2403/2317-4/34-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-034 - Train B Electrical Pen Room & Filtration System	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2334	2334 Electrical Penetration Room, Train B	—	E, R, D, S, N	E, B	Detection System, 2A-46-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2223/2334-1/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2334/2409-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2334/2429-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2116/2334-8/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2117/2334-9/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2236/2334-6/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2246/2334-9/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2334/2333-34/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2343/2334-41/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2346/2334-41/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2246/2334-9/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2321/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2322/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2323/2334-4/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2334/2241-34/6-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2334/CTMT-34/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2334-S02/34-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-34-AUX BUILDING-2334-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** 2-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2333	2333 Electrical Penetration Room, Train A	
2347	2347 Electrical Penetration Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-035 - Train A Electrical Pen Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2333 - 2333 Electrical Penetration Room, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-47-1	U2-35 Detection System 2A-47-1 Room 2333	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2223/2333-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2333/2418-34/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2333/2347-35/35-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2334/2333-34/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2333/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2333/2324-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2223/2333-1/35-139: 2-139-120-03	0:00, F. of 2223	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2334/2333-34/35-139: 2-139-120-02	0:00, E. of 2324	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2334/2333-34/35-139 2318	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAFU-A6B	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAHK260	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VCED261	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VCFARK2P	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VCHAL07P	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-035 - Train A Electrical Pen Rooms	Systems and Features
Fire Zone ID:	2333 - 2333 Electrical Penetration Room, Train A	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-35-AUX BUILDING-2333-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-035 - Train A Electrical Pen Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2347 - 2347 Electrical Penetration Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-47-2	U2-35 Detection System 2A-47-2 Room 2347	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2223/2347-1/35-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2347/2418-35/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2333/2347-35/35-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2347/2332-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2347/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2347/2325-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2347/2326-35/4-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2223/2347-1/35-139: 2-139-120-04	0:00, F. of 2347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2223/2347-1/35-139: 2-139-120-05	0:00, F. of 2347	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2347/2418-35/4-155: 2-155-120-06	0:00, F. of 2418	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAFU-A6B	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAFU-A6D	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAFU-A6E	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VAHK260	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VCED261	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VCFARK2P	1:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
2VCHAL07P	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-035 - Train A Electrical Pen Rooms	Systems and Features
Fire Zone ID:	2347 - 2347 Electrical Penetration Room	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-35-AUX BUILDING-2347-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump, or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>Unit 2: Normal letdown is isolated using performance-based approach orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using performance-based approach Train A PORV or block valve and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve.</li> <li>Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
	or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-035 - Train A Electrical Pen Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-035 - Train A Electrical Pen Rooms  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-035 - Train A Electrical Pen Rooms Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-9), Unit 2 Auxiliary Building Electrical Penetrations Room Train A (Fire Area 2-035), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain charging pump miniflow, establish manual operation of the auxiliary feedwater system, regain control of the pressurizer PORVs, and initiate RCS charging through the boron injection tank.</li> <li>• A design change installed as a result of R.G. 1.97 provides cable separation and redundant signal processing and indication for RCS hot leg temperature loop N2B21TE433.</li> <li>• The licensee installed disconnect switches outside the electrical penetration room for valve Q2E21MOV8131A-A (suction header) and valve Q2E21MOV8133A-A (discharge header). These valves are required to be maintained in the open position to supply seal injection water from the RWST through charging pump 2B.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-035 - Train A Electrical Pen Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to seal 2AH2 Analyzer, MCC 2U, and power supply panel to prevent fire propagation outside of ignition source.
2333	2333 Electrical Penetration Room, Train A	—	E, R, D, S, N	E, R, D, B	Detection System, 2A-47-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 2VAFU-A6B: -- Risk: Required to meet Risk criteria. ERFBS, 2VAHK260: -- Risk: Required to meet Risk criteria. ERFBS, 2VCED261: -- Risk: Required to meet Risk criteria. ERFBS, 2VCFARK2P: -- Risk: Required to meet Risk criteria. ERFBS, 2VCHAL07P: -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2223/2333-1/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2333/2418-34/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2333/2347-35/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2334/2333-34/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2333/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2333/2324-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-35-AUX BUILDING-2333-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
2347	2347 Electrical Penetration Room	—	E, R, S, N	R, D, B	Detection System, 2A-47-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, 2VAFU-A6B: -- Risk: Required to meet Risk criteria. ERFBS, 2VAFU-A6D: -- Risk: Required to meet Risk criteria. ERFBS, 2VAFU-A6E: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-035 - Train A Electrical Pen Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					ERFBS, 2VAHK260: -- Risk: Required to meet Risk criteria. ERFBS, 2VCED261: -- Risk: Required to meet Risk criteria. ERFBS, 2VCFARK2P: -- Risk: Required to meet Risk criteria. ERFBS, 2VCHAL07P: -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2223/2347-1/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2347/2418-35/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2333/2347-35/35-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2347/2332-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2347/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2347/2325-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2347/2326-35/4-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-35-AUX BUILDING-2347-Restricted transient controls: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-039 - Fuel Storage & Storage Rack Pits  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2349	2349 Pits for New Fuel Storage Racks	
2350	2350 Pits for New Fuel Storage Racks	
2459	2459 New Fuel Storage Room	

## Fire Safety Analysis

**Fire Area ID:** 2-039 - Fuel Storage & Storage Rack Pits  
**Fire Zone ID:** 2349 - 2349 Pits for New Fuel Storage Racks

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2239/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/2349-4/39-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-039 - Fuel Storage & Storage Rack Pits  
Fire Zone ID: 2350 - 2350 Pits for New Fuel Storage Racks

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-039 - Fuel Storage & Storage Rack Pits	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2459 - 2459 New Fuel Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-12	U2-39 Detection System 2A-107-12 Room 2459	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2459/2504-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2459/2505-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2459/2446-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2348-39/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2459/2240-39/4-155: 2-155-106-01	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155: 2-155-106-02	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2240-39/4-155: 2-155-106-03	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2459/2348-39/4-155: 2-155-106-04	0:00, W. of 2459	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2459/2446-39/4-155 2432	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 2-039 - Fuel Storage & Storage Rack Pits  
**Fire Zone ID:** 2459 - 2459 New Fuel Storage Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 2-039 - Fuel Storage & Storage Rack Pits  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump aligned to Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-039 - Fuel Storage & Storage Rack Pits  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-039 - Fuel Storage & Storage Rack Pits  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"><li>• Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li><li>• Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li></ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-039 - Fuel Storage & Storage Rack Pits	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-039 - Fuel Storage & Storage Rack Pits	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2349	2349 Pits for New Fuel Storage Racks	—	—	—	FireBarrier, U2-FNP-E-2239/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2240/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/2349-4/39-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.
2350	2350 Pits for New Fuel Storage Racks	—	—	—	FireBarrier, U2-FNP-E-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.
2459	2459 New Fuel Storage Room	—	E, R, S	—	Detection System, 2A-107-12: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U2-FNP-Ceiling-2459/2504-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2459/2505-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2459/2446-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2459/2240-39/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2459/2348-39/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2318-U1	2318 Cable Spreading Room	



## Fire Safety Analysis

**Fire Area ID:** 2-040-U1 - Cable Spreading Room  
**Fire Zone ID:** 2318-U1 - 2318 Cable Spreading Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-43-1	U2-40 Detection System 2A-43-1 Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
N2C31NFAMS2627-1	U2-40 Incipient Detection System N2C31NFAMS2627, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L0041A-1	U2-40 Incipient Detection System N2H25L0041A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040A-N	U2-40 Incipient Detection System N2H25L040A-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040B-N	U2-40 Incipient Detection System N2H25L040B-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040C-N	U2-40 Incipient Detection System N2H25L040C-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040D-N	U2-40 Incipient Detection System N2H25L040D-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040E-N	U2-40 Incipient Detection System N2H25L040E-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2D21L0001	U2-40 Incipient Detection System Q2D21L0001, Room 2318	-	Yes	-- R: Required to meet Risk Criteria.	Yes	-
Q2H25L006-A-1	U2-40 Incipient Detection System Q2H25L006-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L008-A-1	U2-40 Incipient Detection System Q2H25L008-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L009-A-1	U2-40 Incipient Detection System Q2H25L009-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L010-A-1	U2-40 Incipient Detection System Q2H25L010-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2318-U1 - 2318 Cable Spreading Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
Q2H25L011-A-1	U2-40 Incipient Detection System Q2H25L011-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L027B-1	U2-40 Incipient Detection System Q2H25L027B, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L029B-1	U2-40 Incipient Detection System Q2H25L029B, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L037A-1	U2-40 Incipient Detection System Q2H25L037A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-43-1	Praeaction Sprinkler System, U2-40, Cable Spreading Room, Room 2318	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2201/2318-14/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2202/2318-15/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2210/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2213/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2224/2318-18/40-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2226/2318-19/40-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2244/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2245/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2254/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2318/471-U2-42/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2335/2318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/2318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2317/2318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2318-S02/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139: 1-139-118-03	0:00, S. of 2318	-	Yes		Yes	-
U2-FNP-W-2317/2318-34/40-139: 2-139-118-08	0:00, W. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Systems and Features</b>				
<b>Fire Zone ID:</b>	2318-U1 - 2318 Cable Spreading Room					

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2317/2318-34/40-139: 2-139-118-09	0:00, W. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2318/2319-40/42-139 2312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139 2315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-40-AUX BUILDING-2318-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-040-U1 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-040-U1 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of the manual carbon dioxide suppression system will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D	Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Incipient detection modification required to meet risk criteria for Unit 2, but listing for Unit 1.
2318-U1	2318 Cable Spreading Room	E, R	E, R, D, S, N	E, D, B	Detection System, 2A-43-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. Detection System, N2C31NFAMS2627-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N2H25L0041A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N2H25L040A-N: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N2H25L040B-N: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N2H25L040C-N: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N2H25L040D-N: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, N2H25L040E-N: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2D21L0001: -- Risk: Required to meet Risk Criteria. Detection System, Q2H25L006-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L008-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L009-A-1:

## Fire Safety Analysis

**Fire Area ID:** 2-040-U1 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L010-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L011-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L027B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L029B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L037A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2318/318-U2-40/U1-40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2201/2318-14/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2202/2318-15/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2210/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2213/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2224/2318-18/40-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2226/2318-19/40-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2244/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2245/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2254/2318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2318/471-U2-42/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-CHASE2/2318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2501/2318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U1 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-CHASE2/2318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2116/2318-8/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2335/2318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2215/2318-4/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2317/2318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2318/2319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2501/2318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2318-S02/40-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-40-AUX BUILDING-2318-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-43-1: -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2318-U2	2318 Cable Spreading Room	

## Fire Safety Analysis

**Fire Area ID:** 2-040-U2 - Cable Spreading Room  
**Fire Zone ID:** 2318-U2 - 2318 Cable Spreading Room

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-43-1	U2-40 Detection System 2A-43-1 Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
N2C31NFAMS2627-1	U2-40 Incipient Detection System N2C31NFAMS2627, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L0041A-1	U2-40 Incipient Detection System N2H25L0041A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040A-N	U2-40 Incipient Detection System N2H25L040A-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040B-N	U2-40 Incipient Detection System N2H25L040B-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040C-N	U2-40 Incipient Detection System N2H25L040C-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040D-N	U2-40 Incipient Detection System N2H25L040D-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
N2H25L040E-N	U2-40 Incipient Detection System N2H25L040E-N, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2D21L0001	U2-40 Incipient Detection System Q2D21L0001, Room 2318	-	Yes	-- R: Required to meet Risk Criteria.	Yes	-
Q2H25L006-A-1	U2-40 Incipient Detection System Q2H25L006-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L008-A-1	U2-40 Incipient Detection System Q2H25L008-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L009-A-1	U2-40 Incipient Detection System Q2H25L009-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L010-A-1	U2-40 Incipient Detection System Q2H25L010-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2318-U2 - 2318 Cable Spreading Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
Q2H25L011-A-1	U2-40 Incipient Detection System Q2H25L011-A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L027B-1	U2-40 Incipient Detection System Q2H25L027B, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L029B-1	U2-40 Incipient Detection System Q2H25L029B, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
Q2H25L037A-1	U2-40 Incipient Detection System Q2H25L037A, Room 2318	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-43-1	Praeaction Sprinkler System, U2-40, Cable Spreading Room, Room 2318	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2201/2318-14/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2202/2318-15/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2210/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2213/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2224/2318-18/40-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2226/2318-19/40-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2244/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2245/2318-20/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2254/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2318/471-U2-42/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CHASE2/2318-12/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2116/2318-8/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2335/2318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2215/2318-4/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2317/2318-34/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2501/2318-51/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2318-S02/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2318-U2 - 2318 Cable Spreading Room	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2318/318-U2-40/U1-40-139: 1-139-118-03	0:00, S. of 2318	-	Yes		Yes	-
U2-FNP-W-2317/2318-34/40-139: 2-139-118-08	0:00, W. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2317/2318-34/40-139: 2-139-118-09	0:00, W. of 2317	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2318/2319-40/42-139 2312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139 2315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-40-AUX BUILDING-2318-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U2-40-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- D: Required to meet DID criteria.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-040-U2 - Cable Spreading Room  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by {isolating the VCT / stopping the reactor makeup water pumps} to prevent boron dilution and by charging borated water from the RWST using {Train A charging pump / Train B charging pump / swing charging pump aligned to Train A / Train B power}.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs. CCW to RCP thermal barriers are isolated using the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring the Loop 1 and Loop 2 RCPs are shut off.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAPW pump supplying Steam Generator 2A.	
6 Process Monitoring	Essential processes are monitored by dedicated instruments at the hot shutdown panel.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

## Fire Safety Analysis

**Fire Area ID:** 2-040-U2 - Cable Spreading Room

**Nuclear Safety Performance Goals**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of the manual carbon dioxide suppression system will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the two code editions</li> <li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide fuse or other electrical isolation device at the DC shunt connection point and to plumb air from emergency air compressor header to AFW flow control valve.</p> <p>-- Risk: Modification to install incipient detection, provide fuse or other elec. iso. device at the DC shunt conn. pt. and replace trip device in pnl Q2R42B0001A, bkrs LA08 and LA13; pnl Q2R42B0001B, bkr LB02</p> <p>Procedures/Recovery Actions:</p> <p>-- DID: Improvements to procedures necessary to incorporate recovery actions required to meet DID criteria.</p>
2318-U2	2318 Cable Spreading Room	E, R, D	E, R, D, S, N	E, D, B	<p>Detection System, 2A-43-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, N2C31NFAMS2627-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N2H25L0041A-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N2H25L040A-N:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N2H25L040B-N:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N2H25L040C-N:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N2H25L040D-N:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, N2H25L040E-N:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>Detection System, Q2D21L0001:</p> <p>-- Risk: Required to meet Risk Criteria.</p> <p>Detection System, Q2H25L006-A-1:</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L008-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L009-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L010-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L011-A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L027B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L029B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. Detection System, Q2H25L037A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-S-2318/318-U2-40/U1-40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2201/2318-14/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2202/2318-15/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2210/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2213/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2224/2318-18/40-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2226/2318-19/40-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2244/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2245/2318-20/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2254/2318-12/40-139:



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-040-U2 - Cable Spreading Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2318/471-U2-42/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-CHASE2/2318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2501/2318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CHASE2/2318-12/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2116/2318-8/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2335/2318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2215/2318-4/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2317/2318-34/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2318/2319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2501/2318-51/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2318-S02/40-139: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-40-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- DID: Required to meet DID criteria. Restricted transient controls, U2-40-AUX BUILDING-2318-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-43-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2335-U1	2335 Load Center Room, Train A	
2343-U1	2343 Load Center Room, Train A	
2346-U1	2346 Switchgear and M-G Set Room	

## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 2335-U1 - 2335 Load Center Room, Train A

**Systems and Features**

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-39-1	U2-41 Detection System 2A-39-1 Room 2335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-39-2	U2-41 Detection System 2A-39-2 Room 2343	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	Yes
2A-39-3	U2-41 Detection System 2A-39-3 Room 2346	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-37-1	Local CO2 system in Fire Area 41 , room number 2346, 600V Load Center 2I	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-38-1	Local CO2 system in Fire Area 14 , room number 2346, 4160V Swgr 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-40-1	Local CO2 system in Fire Area 41 , room number 2335, 4160V Swgr Bus 2F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-40-2	Local CO2 system in Fire Area 41 , room number 2343, Station Service Trans. 2F 4KV Disc. SW 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-41-1	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2D	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-41-2	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-42-1	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2B	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-42-2	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2C	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 2335-U1 - 2335 Load Center Room, Train A

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2229/2335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2233/2343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2235/2346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2453-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2454-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2455-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2343/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2346/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2343/2334-41/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2346/2334-41/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2346-6/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2346-31/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2335/2318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2346-S01/41-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2335-9/41-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/41	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2235/2346-23/41-139: 2-121-116-12	0:00, C. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-01	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-02	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139: 2-139-119-06	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2346-6/41-139: 2-139-119-05	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139: 2-139-119-03	0:00, E. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139: 2-139-119-04	0:00, E. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139: 2-139-119-09	0:00, W. of 2335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139: 2-139-119-08	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2335-U1 - 2335 Load Center Room, Train A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2346/2339-41/42-139: 2-139-119-07	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2116/2335-8/41-139 2319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2335-9/41-139 2324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2343-9/41-139 2325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139 2321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139 2322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139 2327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAJ5007L	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-41-AUX BUILDING-2335-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U2-41-AUX BUILDING-2335-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-41-AUX BUILDING-2343-Restricted transient controls	-	Yes		Yes	-
U2-41-AUX BUILDING-2346-Restricted transient controls	-	Yes		Yes	-

Fire Safety Analysis

Fire Area ID:	2-041-U1 - Train A Switchgear & Load Center Rooms	Systems and Features
Fire Zone ID:	2343-U1 - 2343 Load Center Room, Train A	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAJ5007L	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 2346-U1 - 2346 Switchgear and M-G Set Room

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAJ5007L	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those</p>

## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-041-U1 - Train A Switchgear & Load Center Rooms NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-24), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-24), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-26), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria) (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between rooms 2346 (Fire Area 2-041) and 2345 (Fire Area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> <li>• There are water hose stations and an automatic water suppressions system</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-12), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.
- A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

### Licensing Action

Appendix R Exemption (No. 2-12), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-13), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/85:

- Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the insitu combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 2-041-U1 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2335-U1	2335 Load Center Room, Train A	E, R, D	E, R, D, S, N	E, R, B	<p>Detection System, 2A-39-1:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-39-2:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>Detection System, 2A-39-3:</p> <ul style="list-style-type: none"> <li>-- DID: Required to meet DID criteria.</li> <li>-- EEEE/LA: Required to support an Engineering Evaluation.</li> <li>-- Risk: Required to meet Risk criteria.</li> <li>-- Separation: Required to meet Separation criteria.</li> <li>-- NPO: Required to meet NPO criteria.</li> </ul> <p>ERFBS, 2VAJ5007L:</p> <ul style="list-style-type: none"> <li>-- Risk: Required to meet Risk criteria.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2229/2335-21/41-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2233/2343-21/41-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2235/2346-23/41-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2335/2453-41/44-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2335/2454-41/44-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2335/2455-41/44-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2343/2452-41/43-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-Ceiling-2346/2452-41/43-155:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2343/2334-41/34-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2345/2346-41/42-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-E-2346/2334-41/34-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-N-2246/2343-9/41-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-N-2346/2345-41/42-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-S-2236/2346-6/41-139:</p> <ul style="list-style-type: none"> <li>-- Barrier: Required to support a fire area boundary evaluation.</li> </ul> <p>FireBarrier, U2-FNP-S-2249/2346-30/41-139:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2250/2346-31/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2335/2318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2346-S01/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2116/2335-8/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2117/2335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2236/2346-6/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2335/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2343/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2346/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-2A-37-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-38-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-41-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-41-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-1: -- DID: Required to meet DID criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U1 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. One Hour Rated Cable, U2-41-AUX BUILDING-2335-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-41-AUX BUILDING-2335-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.
2343-U1	2343 Load Center Room, Train A	—	—	R	ERFBS, 2VAJ5007L:
2346-U1	2346 Switchgear and M-G Set Room	—	—	R	-- Risk: Required to meet Risk criteria. ERFBS, 2VAJ5007L: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2335-U2	2335 Load Center Room, Train A	
2343-U2	2343 Load Center Room, Train A	
2346-U2	2346 Switchgear and M-G Set Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2335-U2 - 2335 Load Center Room, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-39-1	U2-41 Detection System 2A-39-1 Room 2335	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-
2A-39-2	U2-41 Detection System 2A-39-2 Room 2343	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	Yes
2A-39-3	U2-41 Detection System 2A-39-3 Room 2346	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-37-1	Local CO2 system in Fire Area 41 , room number 2346, 600V Load Center 2I	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-38-1	Local CO2 system in Fire Area 14 , room number 2346, 4160V Swgr 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-40-1	Local CO2 system in Fire Area 41 , room number 2335, 4160V Swgr Bus 2F	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-40-2	Local CO2 system in Fire Area 41 , room number 2343, Station Service Trans. 2F 4KV Disc. SW 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-41-1	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2D	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-41-2	Local CO2 System system in Fire Area 41 , room number 2335, 600V Load Center 2A	-	Yes	-- E: Required to meet EEEE criteria. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-42-1	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2B	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
GS-2A-42-2	Local CO2 system in Fire Area 41 , room number 2343, 4160V Swgr 2C	-	Yes	-- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-041-U2 - Train A Switchgear & Load Center Rooms  
**Fire Zone ID:** 2335-U2 - 2335 Load Center Room, Train A

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2229/2335-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2233/2343-21/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2235/2346-23/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2453-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2454-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2335/2455-41/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2343/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2346/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2343/2334-41/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2346/2334-41/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2346-6/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2249/2346-30/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2250/2346-31/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2335/2318-41/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2346-S01/41-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2116/2335-8/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2335-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2335-9/41-139	3:00, , U2 3 hr. Rated Barrier at ele 139 between Rooms 2246/2335 and fire areas 9/41	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2343-9/41-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2235/2346-23/41-139: 2-121-116-12	0:00, C. of 2235	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-01	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-02	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139: 2-139-119-06	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2346-6/41-139: 2-139-119-05	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139: 2-139-119-03	0:00, E. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2346-6/41-139: 2-139-119-04	0:00, E. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139: 2-139-119-09	0:00, W. of 2335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139: 2-139-119-08	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2335-U2 - 2335 Load Center Room, Train A	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2346/2339-41/42-139: 2-139-119-07	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2116/2335-8/41-139 2319	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2117/2335-9/41-139 2324	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2246/2343-9/41-139 2325	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139 2321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139 2322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139 2327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAJ5007L	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-41-AUX BUILDING-2335-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-41-AUX BUILDING-2343-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-41-AUX BUILDING-2346-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
			-- D: Required to meet DID criteria.		
U2-41-AUX BUILDING-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-041-U2 - Train A Switchgear & Load Center Rooms	Systems and Features
Fire Zone ID:	2343-U2 - 2343 Load Center Room, Train A	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAJ5007L	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-041-U2 - Train A Switchgear & Load Center Rooms	Systems and Features
Fire Zone ID:	2346-U2 - 2346 Switchgear and M-G Set Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2VAJ5007L	0:00	-	Yes	-- R: Required to meet Risk criteria.	-	-

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAPW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 2-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1.Electrical power is supplied by diesel generator EDG-2B.2.4.16 kV and 600 V power is supplied by Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled. Initiation of carbon dioxide suppression systems will not damage components needed for safe shutdown; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"> <li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li> <li>• Refinement of field judgments through review of design drawing/documentation; or</li> <li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment B Code Compliance Evaluation for NFPA 12, 2008 Edition, Standard on Carbon Dioxide Extinguishing Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 12, 2008 Edition and NFPA 12, 1973 Edition. The approach was to determine the applicable code editions for carbon dioxide extinguishing systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the two code editions</li><li>• The carbon dioxide systems were determined to be compliant with the relevant sections of NFPA-12-2008 and NFPA 12-1973, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2008 edition were resolved by vetting against the 1973 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those</p>

## Fire Safety Analysis

**Fire Area ID:** 2-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-041-U2 - Train A Switchgear & Load Center Rooms NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-24), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-24), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-26), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria) (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between rooms 2346 (Fire Area 2-041) and 2345 (Fire Area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> <li>• There are water hose stations and an automatic water suppressions system</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-12), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.
- A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

### Licensing Action

Appendix R Exemption (No. 2-12), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-13), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/85:

- Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the insitu combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 2-041-U2 - Train A Switchgear & Load Center Rooms  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to install a fuse for cable 2VAJ5007L in panel Q2H25L004-A and to replace trip device in panel Q2R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2335-U2	2335 Load Center Room, Train A	E, R, D	E, R, D, S, N	E, R, D, B	<p>Detection System, 2A-39-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-39-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>Detection System, 2A-39-3:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>ERFBS, 2VAJ5007L:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2229/2335-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2233/2343-21/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2235/2346-23/41-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2335/2453-41/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2335/2454-41/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2335/2455-41/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2343/2452-41/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2346/2452-41/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2343/2334-41/34-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2345/2346-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2346/2334-41/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2246/2343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2346/2345-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2346-6/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2249/2346-30/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2250/2346-31/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2335/2318-41/40-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2346-S01/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2116/2335-8/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2117/2335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2236/2346-6/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2335-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2246/2343-9/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2335/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2343/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2346/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-2A-37-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-38-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-40-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-041-U2 - Train A Switchgear & Load Center Rooms	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-41-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-41-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to meet EEEE criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-1: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2A-42-2: -- DID: Required to meet DID criteria. -- Risk: Required to meet Risk criteria. Procedures/Recovery Actions, U2-41-AUX BUILDING-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-41-AUX BUILDING-2335-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-41-AUX BUILDING-2343-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-41-AUX BUILDING-2346-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.
2343-U2	2343 Load Center Room, Train A	—	—	R	ERFBS, 2VAJ5007L: -- Risk: Required to meet Risk criteria.
2346-U2	2346 Switchgear and M-G Set Room	—	—	R	ERFBS, 2VAJ5007L: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2319-U1	2319 Corridor - Train B	
2339-U1	2339 Corridor - Train A	
2345-U1	2345 Hallway - Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2319-U1 - 2319 Corridor - Train B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A58	Aux.Bldg.-139'-West Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A59	Aux.Bldg.-139'-West Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A60	Aux.Bldg.-139'-West Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-59-1	U2-42 Detection System 2A-59-1 Room 2319	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria. -- rr: Required to meet RR criteria.	Yes	-
2A-59-2	U2-42 Detection System 2A-59-2 Room 2339	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria. -- rr: Required to meet RR criteria.	Yes	-
2A-59-3	U2-42 Detection System 2A-59-3 Room 2345	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-59-1	Preaction Sprinkler System, U2-42, Corridor - Train B, Room 2319	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	Yes
WS-2A-59-2	Preaction Sprinkler System, U2-42, Corridor - Train A, Room 2339	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	Yes
WS-2A-59-3	Preaction Sprinkler System, U2-42, Hallway - Train A, Room 2345	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria.	Yes	Yes

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2211/2319-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2228/2339-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2234/2345-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2254/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/412-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/413-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/414-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/472-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-042-U1 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 2319-U1 - 2319 Corridor - Train B

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2339/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2345/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2319-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/OUTSIDE-42/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2319/474-42/44-155: 1-139-118-20	0:00, F. of 401	-	Yes		Yes	-
U2-FNP-CEILING-2319/474-42/44-155: 1-139-118-21	0:00, F. of 401	-	Yes		Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-01	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-02	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139: 2-139-119-06	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139: 2-139-119-09	0:00, W. of 2335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139: 2-139-119-08	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139: 2-139-119-07	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-18	0:00, E. of 2319	-	Yes		Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-19	0:00, E. of 2319	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139 301	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2345-S01/42-139 Elev. No. 4 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2345-S01/42-139 2328	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139 2312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139 2315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2319-U1 - 2319 Corridor - Train B	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2319/2300-42/13-139 2313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139 2321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139 2322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139 2327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-42-AUX BUILDING-2319-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U2-42-AUX BUILDING-2319-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-42-AUX BUILDING-2339-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-
U2-42-AUX BUILDING-2339-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-042-U1 - Aux Building Hallways & Corridor  
Fire Zone ID: 2339-U1 - 2339 Corridor - Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2339/2453-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2339/2453 and fire areas 42/44	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2339/2455-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: 2-042-U1 - Aux Building Hallways & Corridor  
Fire Zone ID: 2345-U1 - 2345 Hallway - Train A

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A61	Aux.Bldg.-139'-West Corridor North End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** 2-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"><li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li><li>• Refinement of field judgments through review of design drawing/documentation; or</li><li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

6-1 of the report

- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

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<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

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<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C
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<b>Inactive</b>	Yes
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.

Bases for Acceptability:

- The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on
- full area detection and suppression;

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- limited fire hazards;
- an assessment of in situ combustibles; and
- the substantial construction of the fire area boundary.

To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.

<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-9906-002, Technical Evaluation in Support of GL 86-10 for DCP 03-2-9906
<b>Inactive</b>	Yes
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the significance of in-situ combustibles and fire hazards located between redundant Appendix R SSD raceways.</p> <p>Bases for Acceptability:</p> <p>The basis for the evaluation is that the in situ combustibles and potential fire hazards do not pose an unacceptable risk given an evaluation based on the closest point of the raceways and a conservative assessment of the in situ combustibles, types of combustible, and potential fire hazards. The evaluation further credits both the ionization detection and the automatic sprinkler systems in the rooms.</p>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-042-U1 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-24), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-26), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain the control of one main steam atmospheric relief valve and to monitor RCS boron concentration.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-26), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria) (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:</p> <ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between rooms 2346 (Fire Area 2-041) and 2345 (Fire Area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> <li>• There are water hose stations and an automatic water suppressions system</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-12), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-13), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, and lack of 3 hour barrier separating redundant trains, which was approved by the NRC in a letter dated 11/19/85:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin and to regain the control of the pressurizer PORVs.
- A design change installed as a result of Regulatory Guide (RG) 1.97, provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.
- All required electrical Train-B safe shutdown cabling in room 2319 has been provided with a barrier having a fire rating greater than that of the projected maximum exposure fire severity of 30-min duration.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by Re-analysis supported by Generic Letter 86-10 Evaluation, DCP 03-1-9902, DCP 03-2-9904, DCP 03-2-9906, DCP 03-2-9936, DCP 03-2-9939, Exemption for the use of the fire-rated cables, and OA for control of MDAFW flow control valves and aligning of the backup Nitrogen for the PORVs.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.



## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-042-U1 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 2-13), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/85:</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the insitu combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Steel equipment hatch covers located in the floor and ceiling of fire area 2-020, room 2234 which form part of fire area boundary with fire areas 2-006, room 2185 and 2-042, room 2345 respectively are not fire-rated.</li> <li>• The steel hatch covers are protected by a suppression system.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Licensing Action** Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)

**Licensing Basis** Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):

- The MI cable support span is within the fire test configurations.
- The materials for the MI cable supports are bounded by the fire test configurations.
- The MI cable installation hardware is in accordance with the fire test configurations.
- The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.
- The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.
- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2319-U1	2319 Corridor - Train B	E, R	E, R, D, S, N, rr	E, R, S, B	Detection System, 2A-59-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 2A-59-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 2A-59-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2319/319-U2-42/U1-42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2211/2319-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2228/2339-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2234/2345-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2254/2319-12/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/412-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/413-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/414-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/472-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2339/2452-42/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2345/2452-42/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2345/2346-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2346/2345-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2319-S08/4-121:

## Fire Safety Analysis

**Fire Area ID:** 2-042-U1 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 4/2345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2318/2319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2319/2300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2335/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/2300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/OUTSIDE-42/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2343/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2346/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-CHASE2/2319-12/42-139: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U2-42-AUX BUILDING-2319-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. One Hour Rated Cable, U2-42-AUX BUILDING-2339-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA. Restricted transient controls, U2-42-AUX BUILDING-2319-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-42-AUX BUILDING-2339-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-59-1: -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-59-2: -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-59-3: -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U1 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2339-U1	2339 Corridor - Train A	—	—	—	FireBarrier, U2-FNP-CEILING-2339/2453-42/44-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2339/2455-42/44-139: -- Barrier: Required to support a fire area boundary evaluation.
2345-U1	2345 Hallway - Train A	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2319-U2	2319 Corridor - Train B	
2339-U2	2339 Corridor - Train A	
2345-U2	2345 Hallway - Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2319-U2 - 2319 Corridor - Train B	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A58	Aux.Bldg.-139'-West Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A59	Aux.Bldg.-139'-West Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A60	Aux.Bldg.-139'-West Corridor	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D112	Hose Station - N2V43D112-FZ 42 Room 2345	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D116	Hose Station - N2V43D116-FZ 4 Room 2319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D119	Hose Station - N2V43D119-FZ 42 Room 2319	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-59-1	U2-42 Detection System 2A-59-1 Room 2319	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-59-2	U2-42 Detection System 2A-59-2 Room 2339	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-
2A-59-3	U2-42 Detection System 2A-59-3 Room 2345	-	Yes	-- rr: Required to meet RR criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-59-1	Preaction Sprinkler System, U2-42, Corridor - Train B, Room 2319	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-59-2	Preaction Sprinkler System, U2-42, Corridor - Train A, Room 2339	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes
WS-2A-59-3	Preaction Sprinkler System, U2-42, Hallway - Train A, Room 2345	-	Yes	-- E: Required to support a fire area boundary evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	Yes

## Fire Safety Analysis

**Fire Area ID:** 2-042-U2 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 2319-U2 - 2319 Corridor - Train B

### Systems and Features

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2211/2319-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2228/2339-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2234/2345-20/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2254/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/412-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/413-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/414-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2319/472-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2319/474-42/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2339/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2345/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2319-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/2300-42/13-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/OUTSIDE-42/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2319/474-42/44-155: 1-139-118-20	0:00, F. of 401	-	Yes		Yes	-
U2-FNP-CEILING-2319/474-42/44-155: 1-139-118-21	0:00, F. of 401	-	Yes		Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-01	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2345/2346-41/42-139: 2-139-119-02	0:00, W. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2346/2345-41/42-139: 2-139-119-06	0:00, N. of 2346	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139: 2-139-119-09	0:00, W. of 2335	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139: 2-139-119-08	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139: 2-139-119-07	0:00, W. of 2343	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-18	0:00, E. of 2319	-	Yes		Yes	-
U2-FNP-W-CHASE2/2319-12/42-139: 1-139-118-19	0:00, E. of 2319	-	Yes		Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-042-U2 - Aux Building Hallways & Corridor  
**Fire Zone ID:** 2319-U2 - 2319 Corridor - Train B

### Systems and Features

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2319/319-U2-42/U1-42-139 301	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2345-S01/42-139 Elev. No. 4 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2345-S01/42-139 2328	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139 2312	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2318/2319-40/42-139 2315	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2319/2300-42/13-139 2313	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2335/2339-41/42-139 2321	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2343/2339-41/42-139 2322	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2346/2339-41/42-139 2327	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-42-AUX BUILDING-2319-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U2-42-AUX BUILDING-2319-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-42-AUX BUILDING-2339-One Hour Rated Cable	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U2-42-AUX BUILDING-2339-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-42-AUX BUILDING-2345-Restricted transient controls	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-042-U2 - Aux Building Hallways & Corridor  
Fire Zone ID: 2339-U2 - 2339 Corridor - Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2339/2453-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2339/2453 and fire areas 42/44	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2339/2455-42/44-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID:	2-042-U2 - Aux Building Hallways & Corridor	Systems and Features
Fire Zone ID:	2345-U2 - 2345 Hallway - Train A	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A61	Aux.Bldg.-139'-West Corridor North End	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using excess letdown isolation valves. PZR PORV leakage paths are isolated using Train A PORV and performance-based approach Train B PORV or block valve. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are performance-based approach isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and performance-based approach Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump supplying Steam Generator 2C. Main feed is performance-based approach isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - Performance-based approach RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Performance-based approach Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Performance-based approach Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	DRAW, A-506301, Appendix 10, DOEJ-BE-03-9901-002, Acceptance Insulation Resistance (IR) For the Fire-Rated Control Cables for Farley Nuclear Power Plant DCPs 1029990101, 1039990201, and DCP 2039990601	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to assess the use of 1-hour fire-rated cables as a replacement for Kaowool raceway fire barriers used to protect one train of the redundant safe shutdown function cables within the same fire area. Specifically, the evaluation assesses the insulation resistance (IR) of the 1-hour fire-rated cables to ensure that the electrical equipment connected to the control circuits would remain functional at the elevated control circuit conductor temperature during a fire.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on the establishment of a minimum acceptable IR value for Farley specific application of the 1-hour fire-rated cables, evaluation of the potential leakage current in the cables when at elevated temperatures, and comparison of the cable's IR value, determined from fire test results, to the established minimum criteria.</p>	
<b>Engineering Evaluation ID</b>	DRAW, A506301, Appendix 12, TE-BE-03-9902-001 Evaluation of Circuit Length Increases in DCP 03-1-9902	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation is to verify that changes in control circuit lengths identified in DCP 03-1-9902 are within the identified limits, for existing plant configuration. Some portions of DC control circuits have been replaced with new fire rated M.I. cables to reduce the reliance on Kaowool raceway fire barriers, thus changing the length of the circuits.</p> <p>Bases for Acceptability:</p> <p>The acceptability of the evaluation is based on a comparison of the total resistance of the new control circuit during a potential fire, including a portion of M.I. cable at an elevated temperature, to the maximum permissible resistance value.</p>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-97-1561-001 Fire Barrier Penetration Seal Limiting Design Parameter Evaluation	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	

## Fire Safety Analysis

**Fire Area ID:** 2-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

<b>Summary</b>	<p>Purpose:</p> <p>Evaluate various penetration seals which, as a result of plant walkdowns of as built configurations, exhibited one or more Limiting Design Parameters (LDPs) which were outside limits previously established via qualification test reviews.</p> <p>Bases for Acceptability:</p> <p>The basis of the evaluation was to establish the acceptability of the field established configurations through either:</p> <ul style="list-style-type: none"><li>• Utilizing engineering judgment based on additional reviews of test reports to justify the LDP in question;</li><li>• Refinement of field judgments through review of design drawing/documentation; or</li><li>• Establishing additional technical bases which allowed reapplication of acceptance criteria for LDPs.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table</li></ul>



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

6-1 of the report

- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
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<b>Inactive</b>	No
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<b>Functionally Equivalent</b>	Yes
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

<b>Engineering Evaluation ID</b>	ENGDOC, TE-BE-03-9902-002, Technical Evaluation in Support of FL 86-10 for DCP 03-1-9902 Install Fire Rated M.I. Cables in Fire Areas 1-013; 1-042, 2-013; and 2-042 for Control Circuits Associated With DG 1-2A and DG 1C
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<b>Inactive</b>	Yes
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<b>Functionally Equivalent</b>	No
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<b>Adequate for the Hazard</b>	No
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<b>Summary</b>	Purpose:
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The evaluation is to assess the adequacy of the spatial separation based on in situ combustibles and potential fire hazards located between redundant trains of Fire Safe Shutdown (SSD) equipment.

Bases for Acceptability:

The evaluation determined that the spatial separation provides reasonable assurance that a fire would not damage both SSD trains. This conclusion was based on

- full area detection and suppression;

## Fire Safety Analysis

**Fire Area ID:** 2-042-U2 - Aux Building Hallways & Corridor  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

- limited fire hazards;
- an assessment of in situ combustibles; and
- the substantial construction of the fire area boundary.

To ensure the combustible loading in the area of the redundant trains is not increased, the combustible control program is required to be updated to maintain the area of spatial separation free of transients.

**Engineering Evaluation ID** ENGDOC, TE-BE-9906-002, Technical Evaluation in Support of GL 86-10 for DCP 03-2-9906

**Inactive** Yes

**Functionally Equivalent** No

**Adequate for the Hazard** No

**Summary** Purpose:

The purpose of the evaluation is to assess the significance of in-situ combustibles and fire hazards located between redundant Appendix R SSD raceways.

Bases for Acceptability:

The basis for the evaluation is that the in situ combustibles and potential fire hazards do not pose an unacceptable risk given an evaluation based on the closest point of the raceways and a conservative assessment of the in situ combustibles, types of combustible, and potential fire hazards. The evaluation further credits both the ionization detection and the automatic sprinkler systems in the rooms.

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-042-U2 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-24), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:	
	<ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assemblies between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> </ul>	
	This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-26), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 09/10/1986:	
	<ul style="list-style-type: none"> <li>• Manual operator actions can be performed to regain the control of one main steam atmospheric relief valve and to monitor RCS boron concentration.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul>	
	This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-26), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria) (III.G.2.a criteria)	
<b>Licensing Basis</b>	Exemption request per 05/31/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 09/10/1986:	
	<ul style="list-style-type: none"> <li>• The construction and the installation of door/transom assembly between rooms 2346 (Fire Area 2-041) and 2345 (Fire Area 2-042), and the configuration of the in-situ combustibles, provide reasonable assurance that fire would not propagate to the adjacent fire area.</li> <li>• There are water hose stations and an automatic water suppressions system</li> </ul>	
	This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:	
	<ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-12), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-041), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:

- Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the in-situ combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

### Licensing Action

Appendix R Exemption (No. 2-13), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)

### Licensing Basis

Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, and lack of 3 hour barrier separating redundant trains, which was approved by the NRC in a letter dated 11/19/85:

- Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin and to regain the control of the pressurizer PORVs.
- A design change installed as a result of Regulatory Guide (RG) 1.97, provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.
- All required electrical Train-B safe shutdown cabling in room 2319 has been provided with a barrier having a fire rating greater than that of the projected maximum exposure fire severity of 30-min duration.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by Re-analysis supported by Generic Letter 86-10 Evaluation, DCP 03-1-9902, DCP 03-2-9904, DCP 03-2-9906, DCP 03-2-9936, DCP 03-2-9939, Exemption for the use of the fire-rated cables, and OA for control of MDAFW flow control valves and aligning of the backup Nitrogen for the PORVs.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-042-U2 - Aux Building Hallways & Corridor NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 2-13), Unit 2 Auxiliary Building, EI 139 ft (Fire Area 2-042), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated nonsafety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/85:</p> <ul style="list-style-type: none"> <li>• Based on the construction, the installation of the door/transom assembly between rooms 2346 (area 2-041) and 2345 (area 2-042), and the configuration of the insitu combustibles in these fire areas, a fire would not propagate through the transom opening and spread into the adjacent fire areas.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-31), Non-Rad. Side Corridor - Auxiliary Building EI 121 ft. (Fire Area 2-020), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Steel equipment hatch covers located in the floor and ceiling of fire area 2-020, room 2234 which form part of fire area boundary with fire areas 2-006, room 2185 and 2-042, room 2345 respectively are not fire-rated.</li> <li>• The steel hatch covers are protected by a suppression system.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"> <li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li> <li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li> <li>• The weld strength is equivalent to that of the structural supporting steel material.</li> <li>• A seismic event is not postulated to occur concurrently with the fire.</li> </ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Licensing Action** Appendix R Exemption (Use of MI cable), Unit 1 and 2 Auxiliary Building (Fire Areas 1-013, 1-042, 2-013, 2-042) 1 hour enclosure (III.G.2.c criteria)

**Licensing Basis** Exemption request per APC letter to the NRC provides the following justification for use of MI cables as 1 hour enclosure to protect Train A onsite power system related SSD circuits, with automatic fire suppression and detection, which was approved by the NRC in letters dated 02/13/2006 (Unit 2) and 03/22/2006 (Unit 1):

- The MI cable support span is within the fire test configurations.
- The materials for the MI cable supports are bounded by the fire test configurations.
- The MI cable installation hardware is in accordance with the fire test configurations.
- The MI cable conductor-to-conductor and conductor-to-sheath minimum insulation resistance measured during the fire test and during the post-fire hose test would not affect the functioning of the components connected to the control cables. The evaluation included the effects of the reduced insulation resistance for the potential spurious actuation of the associated control devices and the control power supply protection breaker or fuse due to an increase in the leakage current.
- The cable conductor resistance of the MI cables at 1700°F has been evaluated and found to be acceptable for the minimum required control circuit voltage at the components during a fire event. The maximum temperature from the ASTM E119 curve for a 1-h fire test is 1700°F.
- The fire areas which take credit for the 1-h fire rating of the MI cables are provided with smoke detection and automatic fire suppression throughout the fire area.

In conclusion, the bases for previous acceptance remains valid.

This exemption is no longer required because the subject cables have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
2319-U2	2319 Corridor - Train B	E, R, D	E, R, D, S, N, rr	E, R, D, B	Detection System, 2A-59-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 2A-59-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. -- Rad. Release: Required to meet RR criteria. Detection System, 2A-59-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-S-2319/319-U2-42/U1-42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2211/2319-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2228/2339-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2234/2345-20/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2254/2319-12/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/412-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/413-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/414-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2319/472-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2319/474-42/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2339/2452-42/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2345/2452-42/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2345/2346-41/42-139:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2346/2345-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2319-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 4/2345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2318/2319-40/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2319/2300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2335/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/2300-42/13-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/OUTSIDE-42/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2343/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2346/2339-41/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-CHASE2/2319-12/42-139: -- Barrier: Required to support a fire area boundary evaluation. One Hour Rated Cable, U2-42-AUX BUILDING-2319-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. One Hour Rated Cable, U2-42-AUX BUILDING-2339-One Hour Rated Cable: -- Risk: Required to meet Risk criteria. Restricted transient controls, U2-42-AUX BUILDING-2319-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-42-AUX BUILDING-2339-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Restricted transient controls, U2-42-AUX BUILDING-2345-Restricted transient controls: -- DID: Required to meet DID criteria. Water Suppression, WS-2A-59-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-59-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-042-U2 - Aux Building Hallways & Corridor	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Risk: Required to meet Risk criteria. Water Suppression, WS-2A-59-3: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. -- Risk: Required to meet Risk criteria.
2339-U2	2339 Corridor - Train A	—	—	—	FireBarrier, U2-FNP-CEILING-2339/2453-42/44-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2339/2455-42/44-139: -- Barrier: Required to support a fire area boundary evaluation.
2345-U2	2345 Hallway - Train A	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2-S12-U1	Stairwell No. 12	
2452-U1	2452 Storage Area	
2462-U1	2462 Nonradioactive Ventilation Equipment Room	
2463-U1	2463 Storage Room	
2464-U1	2464 Storage Room	
2502-U1	2502 Unassigned Area	
2506-U1	2506 Component Cooling Surge Tank Room	

Fire Safety Analysis

Fire Area ID:	2-043-U1 - Aux Building	Systems and Features
Fire Zone ID:	2-S12-U1 - Stairwell No. 12	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2452-U1 - 2452 Storage Area	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D121	Hose Station - N2V43D121-FZ 44 Room 2453	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-1	U2-43 Detection System 2A-51-1 Room 2452	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-52-1	Wet Pipe Sprinkler System, U2-43, Storage Area, Room 2452	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-472/2452-U1-44/U2-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2452/471-U2-43/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2339/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2343/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2345/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2346/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2429-43/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2454-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2466/2452-13/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2452-6/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2452-U1 - 2452 Storage Area	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2236/2452-6/43-155: 2-155-123-01	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-02	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-03	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-04	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2452/2429-43/4-155 2484	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155 2481	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155 2480	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2452-S01/43-155 Elev. No. 4 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2452-S01/43-155 2439	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/OUTSIDE-43/YARD-155 2436	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-43-AUX BUILDING-2452-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2462-U1 - 2462 Nonradioactive Ventilation Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A57	Aux.Bldg.-155'-Non-Radwaste Vent. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D106	Hose Station - N2V43D106-FZ 43 Room 2462	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-5	U2-43 Detection System 2A-51-5 Room 2462	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2462/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2462/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2462-S01/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2462-S01/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2463/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2464/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2462/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2463/2462-43/43-155 2440	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 2-043-U1 - Aux Building  
**Fire Zone ID:** 2462-U1 - 2462 Nonradioactive Ventilation Equipment Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2463-U1 - 2463 Storage Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-6	U2-43 Detection System 2A-51-6 Room 2463	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2241/2463-6/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2463/2506-43/43-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2463/2464-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2463/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2463/2464-43/43-155 2448	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2463/2462-43/43-155 2440	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2464-U1 - 2464 Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A48	Aux.Bldg.-155'-Clean Storage Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-7	U2-43 Detection System 2A-51-7 Room 2464	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2241/2464-4/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2463/2464-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2464/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2464/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2464/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2463/2464-43/43-155 2448	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2502-U1 - 2502 Unassigned Area	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D101	Hose Station - N2V43D101-FZ 51 Room 2501	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-2	U2-43 Detection System 2A-110-2 Room 2502	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2502/2501-43/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2502/2501-43/51-175 2509	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2506-U1 - 2506 Component Cooling Surge Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-4	U2-43 Detection System 2A-110-4 Room 2506	-	Yes		Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2463/2506-43/43-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-043-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-043-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-043-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-043-U1 - Aux Building NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-2), Unit 2 Auxiliary Building, EI 155 ft and 175 ft (Fire Area 2-043), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Rooms containing redundant equipment and cabling (2464 and 2462) are separated by a non-fire-rated concrete wall.</li> <li>• Room 2462 contains full coverage preaction sprinkler system.</li> <li>• The insitu combustible fire loading in both rooms is low with a maximum fire severity of less than 30 minutes.</li> <li>• The S/G-A pressure transmitters located in room 2464 are physically separated by a minimum distance of 12 ft from the redundant S/G-B pressure transmitters, a distance greater than 30 ft from the redundant S/G-C pressure transmitters, and are located approximately 8 ft from the concrete wall separating rooms 2464 and 2462. The S/G-B pressure transmitters and the redundant S/G-C pressure transmitters located in room 2462 are physically separated by a distance greater than 20 ft.</li> <li>• Two channels of the redundant S/G-A, S/G-B, and S/G-C pressure transmitter cable raceways routed through room 2462 have been protected with fire barriers.</li> <li>• Manual actions can be performed to restore ventilation to the Train A battery room.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9906.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

**Fire Area ID:** 2-043-U1 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-S12-U1	Stairwell No. 12	—	—	—	—
2452-U1	2452 Storage Area	E	E, R, D, S, N	E, B	<p>Detection System, 2A-51-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>-- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U0-FNP-N-472/2452-U1-44/U2-44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-S-2452/471-U2-43/U0-44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2339/2452-42/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2343/2452-41/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2345/2452-42/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2346/2452-41/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2452/2429-43/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2452/2454-43/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2466/2452-13/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2452-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2452/2453-43/44-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2452/2462-43/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2453/2452-44/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2454/2452-44/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2455/2452-44/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2236/2452-6/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-Elev 4/2452-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-STAIR 1/2452-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2236/2452-6/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2452/2453-43/44-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-43-AUX BUILDING-2452-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-52-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2462-U1	2462 Nonradioactive Ventilation Equipment Room	—	E, R, S, N	—	Detection System, 2A-51-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2462/2241-43/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2452/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2462/2241-43/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 4/2462-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/2462-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2463/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2464/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2462/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.
2463-U1	2463 Storage Room	—	E, R, S, N	—	Detection System, 2A-51-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2241/2463-6/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/2506-43/43-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2464-U1	2464 Storage Room	—	E, R, S, N	—	<p>FireBarrier, U2-FNP-E-2463/2464-43/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2463/OUTSIDE-43/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2463/2462-43/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2463/OUTSIDE-43/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Detection System, 2A-51-7:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2241/2464-4/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2463/2464-43/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2464/2241-43/6-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2464/OUTSIDE-43/YARD-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2464/2462-43/43-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>
2502-U1	2502 Unassigned Area	—	E, R, S, N	—	<p>Detection System, 2A-110-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.  -- Separation: Required to meet Separation criteria.  -- NPO: Required to meet NPO criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2502/OUTSIDE-43/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2502/OUTSIDE-43/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2502/2501-43/51-175:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2502/OUTSIDE-43/YARD-175:  -- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U1 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2506-U1	2506 Component Cooling Surge Tank Room	—	—	—	FireBarrier, U2-FNP-Ceiling-2463/2506-43/43-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
2-S12-U2	Stairwell No. 12	
2452-U2	2452 Storage Area	
2462-U2	2462 Nonradioactive Ventilation Equipment Room	
2463-U2	2463 Storage Room	
2464-U2	2464 Storage Room	
2502-U2	2502 Unassigned Area	
2506-U2	2506 Component Cooling Surge Tank Room	



Fire Safety Analysis

Fire Area ID:	2-043-U2 - Aux Building	Systems and Features
Fire Zone ID:	2-S12-U2 - Stairwell No. 12	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2452-U2 - 2452 Storage Area	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D120	Hose Station - N2V43D120-FZ 43 Room 2452	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D121	Hose Station - N2V43D121-FZ 44 Room 2453	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-1	U2-43 Detection System 2A-51-1 Room 2452	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-52-1	Wet Pipe Sprinkler System, U2-43, Storage Area, Room 2452	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-472/2452-U1-44/U2-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-2452/471-U2-43/U0-44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2339/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2343/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2345/2452-42/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2346/2452-41/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2429-43/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2452/2454-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2466/2452-13/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2236/2452-6/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/2453-43/44-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2453/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2452-U2 - 2452 Storage Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2454/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2455/2452-44/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2236/2452-6/43-155: 2-155-123-01	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-02	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-03	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2236/2452-6/43-155: 2-155-123-04	0:00, E. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2452/2429-43/4-155 2484	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2453-43/44-155 2481	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2453/2452-44/43-155 2480	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2452-S01/43-155 Elev. No. 4 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2452-S01/43-155 2439	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/OUTSIDE-43/YARD-155 2436	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-43-AUX BUILDING-2452-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2462-U2 - 2462 Nonradioactive Ventilation Equipment Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A57	Aux.Bldg.-155'-Non-Radwaste Vent. Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D106	Hose Station - N2V43D106-FZ 43 Room 2462	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-5	U2-43 Detection System 2A-51-5 Room 2462	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	Yes

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2462/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2452/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2462/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2462-S01/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2462-S01/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2463/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2464/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2462/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2463/2462-43/43-155 2440	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** 2-043-U2 - Aux Building  
**Fire Zone ID:** 2462-U2 - 2462 Nonradioactive Ventilation Equipment Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2463-U2 - 2463 Storage Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-6	U2-43 Detection System 2A-51-6 Room 2463	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2241/2463-6/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2463/2506-43/43-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2463/2464-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2463/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2463/2464-43/43-155 2448	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2463/2462-43/43-155 2440	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2464-U2 - 2464 Storage Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A48	Aux.Bldg.-155'-Clean Storage Rm.	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
A90	Aux.Bldg.-155'-N2 Storage Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-51-7	U2-43 Detection System 2A-51-7 Room 2464	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2241/2464-4/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2463/2464-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2464/2241-43/6-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2464/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2464/2462-43/43-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2463/2464-43/43-155 2448	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2502-U2 - 2502 Unassigned Area	

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D101	Hose Station - N2V43D101-FZ 51 Room 2501	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-2	U2-43 Detection System 2A-110-2 Room 2502	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2502/2501-43/51-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2502/2501-43/51-175 2509	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2506-U2 - 2506 Component Cooling Surge Tank Room	

### Extinguishers

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### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-4	U2-43 Detection System 2A-110-4 Room 2506	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2463/2506-43/43-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

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### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-043-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAPW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Performance-based approach Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-043-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolate	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> 2-043-U2 - Aux Building <b>Compliance Basis:</b> NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		<b>Engineering Evaluations</b>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-043-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-043-U2 - Aux Building NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-2), Unit 2 Auxiliary Building, EI 155 ft and 175 ft (Fire Area 2-043), Enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression(III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letters to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Rooms containing redundant equipment and cabling (2464 and 2462) are separated by a non-fire-rated concrete wall.</li> <li>• Room 2462 contains full coverage preaction sprinkler system.</li> <li>• The insitu combustible fire loading in both rooms is low with a maximum fire severity of less than 30 minutes.</li> <li>• The S/G-A pressure transmitters located in room 2464 are physically separated by a minimum distance of 12 ft from the redundant S/G-B pressure transmitters, a distance greater than 30 ft from the redundant S/G-C pressure transmitters, and are located approximately 8 ft from the concrete wall separating rooms 2464 and 2462. The S/G-B pressure transmitters and the redundant S/G-C pressure transmitters located in room 2462 are physically separated by a distance greater than 20 ft.</li> <li>• Two channels of the redundant S/G-A, S/G-B, and S/G-C pressure transmitter cable raceways routed through room 2462 have been protected with fire barriers.</li> <li>• Manual actions can be performed to restore ventilation to the Train A battery room.</li> <li>• Plant procedures exist for resetting spurious SI, CVI and CI safety signals from the main control room.</li> </ul> <p>Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9906.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Licensing Action** Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)

**Licensing Basis** Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:

All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:

- Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.
- The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.
- The weld strength is equivalent to that of the structural supporting steel material.
- A seismic event is not postulated to occur concurrently with the fire.

Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 2-043-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	D	Modifications: -- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.
2-S12-U2	Stairwell No. 12	—	—	—	—
2452-U2	2452 Storage Area	E, D	E, R, D, S, N	E, B	Detection System, 2A-51-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-N-472/2452-U1-44/U2-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-2452/471-U2-43/U0-44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2339/2452-42/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2343/2452-41/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2345/2452-42/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2346/2452-41/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2452/2429-43/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2452/2454-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2466/2452-13/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 1/2452-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2452/2453-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2452/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2236/2452-6/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 4/2452-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2452-S01/43-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2462-U2	2462 Nonradioactive Ventilation Equipment Room	—	E, R, S, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2236/2452-6/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/2453-43/44-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2453/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2454/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2455/2452-44/43-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-43-AUX BUILDING-2452-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2A-52-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 2A-51-5: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2462/2241-43/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2452/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2462/2241-43/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 4/2462-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/2462-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2463/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2464/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2462/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-043-U2 - Aux Building  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2463-U2	2463 Storage Room	—	E, R, S, N	—	Detection System, 2A-51-6: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2241/2463-6/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/2506-43/43-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2463/2464-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2463/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2463/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2463/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.
2464-U2	2464 Storage Room	—	E, R, S, N	—	Detection System, 2A-51-7: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2241/2464-4/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2463/2464-43/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2464/2241-43/6-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2464/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2464/2462-43/43-155: -- Barrier: Required to support a fire area boundary evaluation.
2502-U2	2502 Unassigned Area	—	E, R, S, N	—	Detection System, 2A-110-2: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2502/2501-43/51-175:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-043-U2 - Aux Building	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2506-U2	2506 Component Cooling Surge Tank Room	—	E, R, N	—	-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. Detection System, 2A-110-4: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-Ceiling-2463/2506-43/43-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-054 - Aux Building Elevator Machine Room No. 4 and Elevator No. 1 Shaft  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2503	2503 Elevator Machine Room No. 4 and Elevator No. 1 Shaft	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-054 - Aux Building Elevator Machine Room No. 4 and Elevator No. 1 Shaft	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2503 - 2503 Elevator Machine Room No. 4 and Elevator No. 1 Shaft	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-3	U2-54 Detection System 2A-110-3 Room 2503	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2503/OUTSIDE-54/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 1/2503-S01/54-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2503/OUTSIDE-54/YARD-175: 2-175-124-01	0:00, N. of 2503	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2503/OUTSIDE-54/YARD-175: 2-175-124-02	0:00, S. of 2503	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-054 - Aux Building Elevator Machine Room No. 4 and Elevator No. 1 Shaft  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-054 - Aux Building Elevator Machine Room No. 4 and Elevator No. 1 Shaft  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-054 - Aux Building Elevator Machine Room No. 4 and Elevator No. 1 Shaft	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-054 - Aux Building Elevator Machine Room No. 4 and Elevator No. 1 Shaft	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2503	2503 Elevator Machine Room No. 4 and Elevator No. 1 Shaft	—	E, R, S	—	Detection System, 2A-110-3: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 1/2503-S01/54-175: -- Barrier: Required to support a fire area boundary evaluation.

Fire Safety Analysis

Fire Area ID:	2-055 - Containment	Fire Area Definition
Compliance Basis:	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-CTMT	Containment, Unit 2	

## Fire Safety Analysis

**Fire Area ID:** 2-055 - Containment  
**Fire Zone ID:** 2-CTMT - Containment, Unit 2

**Systems and Features**

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2T43V001	Hose Station - N2T43V001-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V002	Hose Station - N2T43V002-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V003	Hose Station - N2T43V003-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V004	Hose Station - N2T43V004-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V005	Hose Station - N2T43V005-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V006	Hose Station - N2T43V006-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V007	Hose Station - N2T43V007-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2T43V008	Hose Station - N2T43V008-FZ 55 Room CTMT	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-22-1	U2-55 Detection System 2A-22-1 Room CTMT	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
2T-4-1	U2-55 Detection System 2T-4-1 Room CTMT	-	Yes	-- N: Required to meet NPO criteria. -- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2127/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2129/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2130/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2131/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2189/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2194/CTMT-6/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2241/CTMT-6/55-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2241/CTMT-6/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2241/CTMT-6/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2429/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2111/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-055 - Containment	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-CTMT - Containment, Unit 2	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2112/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2125/CTMT-1/55-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2172/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2182/CTMT-5/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2183/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2184/CTMT-1/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/CTMT-4/55-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2223/CTMT-1/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2332/CTMT-4/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2333/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2334/CTMT-34/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2347/CTMT-35/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2409/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2418/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-2196/CTMT-1/55-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2196/CTMT-1/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2237/CTMT-4/55-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2478/CTMT-4/55-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2429/CTMT-4/55-155 2467	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-55-CTMT-CTMT-RCP Oil Collection System	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-055 - Containment  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	<ul style="list-style-type: none"> <li>• Unit 2: Normal letdown is isolated using performance-based approach orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is performance-based approach isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are performance-based approach isolated using Train A PORV and Train B PORV or the PORV block valves. The RCS to RHR high/low pressure interface is performance-based approach isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> <li>• Unit 1: Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.</li> </ul>	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>• Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A/Train B charging pump(s) or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>• Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-055 - Containment  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.1 RCS Pressure Control - Pressure Transient	<ul style="list-style-type: none"> <li>Unit 2: Undesired depressurization due to inadvertent spray is performance-based approach prevented by ensuring normal and auxiliary spray valves remain closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> <li>Unit 1: Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.</li> </ul>	
4.2 RCS Pressure Control - Positive Pressure Control	<ul style="list-style-type: none"> <li>Unit 2: Positive control of RCS pressure is accomplished with performance-based approach Train A PORV, Train B PORV or aux spray for pressure reduction and performance-based approach Pressurizer Heater Group B for pressure increase.</li> <li>Unit 1: Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.</li> </ul>	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A/Train B MDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - Performance-based approach RCS pressure is monitored. 3. Pressurizer Level - Performance-based approach pressurizer level is monitored. 4. RCS Temperature - Performance-based approach RCS Loop 1/Loop 2/Loop 3 temperature is monitored. 5. SG Pressure - Performance-based approach Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Performance-based approach Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-055 - Containment  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in Containment. There are no automatic suppression systems in Containment. Equipment is qualified for harsh environment, including water spray and vital equipment is located above the sump submergence level that would be expected during fire suppression activities. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-055 - Containment	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-055 - Containment	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (CB), Unit 1 and 2 Containment Buildings (Fire Areas 1-055, 2-055) 20 feet separation without intervening combustibles (III.G.2.d criteria)
<b>Licensing Basis</b>	<p>Exemption request per 06/18/1982 and 07/27/1982 APC letters to the NRC provides the following justification for the lack of 20 feet horizontal distance separation between safe shutdown circuits with no intervening combustibles, which was approved by the NRC in a letter dated 12/30/1983:</p> <p>For pressurizer vent paths:</p> <ul style="list-style-type: none"><li>• Redundant cables are routed in separate enclosures; within the enclosures, a hot short could not inadvertently open the PORVs.</li><li>• Alternate means of depressurization is provided by the pressurizer auxiliary spray which is separated from redundant equipment by 20 feet with no intervening combustibles.</li></ul> <p>For reactor vessel head vent system flow paths:</p> <ul style="list-style-type: none"><li>• Redundant cables are routed in separate enclosures; within the enclosures, a hot short could not inadvertently open the head vent valves.</li></ul> <p>For pressurizer pressure and level instrumentation:</p> <ul style="list-style-type: none"><li>• One train of primary system pressure indication is available with cables horizontally separated by more than 20 feet free of intervening combustibles from redundant counterparts</li></ul> <p>Furthermore, for all areas of concern, smoke detection and manual hose stations are provided in the area and access is restricted during plant operations reducing the likelihood of a transient combustible exposure fire. Also Containment cables are qualified to IEEE Standard 383, and are routed in conduit in the vicinity of the equipment, and are protected with overcurrent devices.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-055 - Containment  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-CTMT	Containment, Unit 2	—	E, R, S, N	D, B	Detection System, 2A-22-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2T-4-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-E-2127/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2129/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2130/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2131/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2189/CTMT-6/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2194/CTMT-6/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2241/CTMT-6/55-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2241/CTMT-6/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2241/CTMT-6/55-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2429/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2111/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2112/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2125/CTMT-1/55-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2172/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2182/CTMT-5/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2183/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2184/CTMT-1/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2186/CTMT-4/55-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2223/CTMT-1/55-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-055 - Containment	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-2332/CTMT-4/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2333/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2334/CTMT-34/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2347/CTMT-35/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2409/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2418/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2196/CTMT-1/55-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2237/CTMT-4/55-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2478/CTMT-4/55-155: -- Barrier: Required to support a fire area boundary evaluation. RCP Oil Collection System, U2-55-CTMT-CTMT-RCP Oil Collection System: -- DID: Required to meet DID criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U1 - Unit 2 Cable Tunnel - Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2-075-U1	Unit 2 Cable Tunnel - Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U1 - Unit 2 Cable Tunnel - Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-075-U1 - Unit 2 Cable Tunnel - Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2D-77-1	Wet Pipe Sprinkler System, U2-75, Diesel Building Cable Tunnel Train A, Room 2075	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1 D731-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2 D731-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1 2234-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2 2234-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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Fire Safety Analysis

Fire Area ID:	2-075-U1 - Unit 2 Cable Tunnel - Train A	Systems and Features
Fire Zone ID:	2-075-U1 - Unit 2 Cable Tunnel - Train A	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-75-NA-AREA WIDE-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-075-U1 - Unit 2 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room OR Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room OR Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-075-U1 - Unit 2 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U1 - Unit 2 Cable Tunnel - Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-075-U1 - Unit 2 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: 2-075-U1 - Unit 2 Cable Tunnel - Train A Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 1-8), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075 Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 2-24), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li><li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 2-24), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Fire resistant coating on a door has been placed in a surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U1 - Unit 2 Cable Tunnel - Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-075-U1	Unit 2 Cable Tunnel - Train A	E	—	E, B	FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL A/NA-2-075/31-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL A/NA-2-075/31-155-2: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-75-NA-AREA WIDE-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2D-77-1: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U2 - Unit 2 Cable Tunnel - Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2-075-U2	Unit 2 Cable Tunnel - Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U2 - Unit 2 Cable Tunnel - Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-075-U2 - Unit 2 Cable Tunnel - Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2D-77-1	Wet Pipe Sprinkler System, U2-75, Diesel Building Cable Tunnel Train A, Room 2075	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1 D731-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2 D731-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1 2234-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2 2234-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—



Fire Safety Analysis

Fire Area ID:	2-075-U2 - Unit 2 Cable Tunnel - Train A	Systems and Features
Fire Zone ID:	2-075-U2 - Unit 2 Cable Tunnel - Train A	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-75-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U2-75-NA-AREA WIDE-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-075-U2 - Unit 2 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump, or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train B PORV for pressure reduction and Pressurizer Heater Group B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using TrTrain B MDAFW pump supplying Steam Generator 2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Performance-based approach shutdown margin is monitored. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 3. 4. RCS Temperature - Performance-based approach RCS Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train B equipment.	

## Fire Safety Analysis

**Fire Area ID:** 2-075-U2 - Unit 2 Cable Tunnel - Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train..	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U2 - Unit 2 Cable Tunnel - Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U2 - Unit 2 Cable Tunnel - Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

Fire Area ID: 2-075-U2 - Unit 2 Cable Tunnel - Train A Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-8), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075 Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N1B21TE413, N1B21TE423, and N1B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-24), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain control of one main steam atmospheric relief valve and to monitor boron concentration and shutdown margin.</li> <li>• A design change installed as a result of Regulatory Guide (RG) 1.97 provides a redundant signal processing and indication between RCS hot leg temperature loops N2B21TE413, N2B21TE423, and N2B21TE433.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-24), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train A (Fire Area 2-075), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-075-U2 - Unit 2 Cable Tunnel - Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R, D	<p>Modifications:</p> <p>-- DID: Modification to provide Train B power to the temperature recorder to maintain RCS temperature indication for Loop 2 when Train A power is not available.</p> <p>-- Risk: Modification to replace trip device in panel Q2R42B0001A, breaker LA13.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2-075-U2	Unit 2 Cable Tunnel - Train A	E, D	—	E, R, B	<p>FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL A/DGB-2-075/56A-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL A/NA-2-075/31-155-1:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL A/NA-2-075/31-155-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>Procedures/Recovery Actions, U2-75-NA-AREA WIDE-</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>Restricted transient controls, U2-75-NA-AREA WIDE-Restricted transient controls:</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-2D-77-1:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U1 - Unit 2 Cable Tunnel - Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2-076-U1	Unit 2 Cable Tunnel - Train B	



## Fire Safety Analysis

**Fire Area ID:** 2-076-U1 - Unit 2 Cable Tunnel - Train B  
**Fire Zone ID:** 2-076-U1 - Unit 2 Cable Tunnel - Train B

**Systems and Features**

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2Y43D001P	Hose Station - N2Y43D001P-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001Q	Hose Station - N2Y43D001Q-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001R	Hose Station - N2Y43D001R-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001S	Hose Station - N2Y43D001S-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001T	Hose Station - N2Y43D001T-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001U	Hose Station - N2Y43D001U-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001V	Hose Station - N2Y43D001V-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001W	Hose Station - N2Y43D001W-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001X	Hose Station - N2Y43D001X-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001Y	Hose Station - N2Y43D001Y-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001Z	Hose Station - N2Y43D001Z-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D002A	Hose Station - N2Y43D002A-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D002B	Hose Station - N2Y43D002B-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2D-98-1	Wet Pipe Sprinkler System, U2-76, Diesel Building Cable Tunnel Train B, Room 2076	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U1 - Unit 2 Cable Tunnel - Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-076-U1 - Unit 2 Cable Tunnel - Train B	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1 D732-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2 D732-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1 D733-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2 D733-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1 2235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2 2235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to meet EEEE criteria.	-	-

## Fire Safety Analysis

**Fire Area ID:** 2-076-U1 - Unit 2 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** 2-076-U1 - Unit 2 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U1 - Unit 2 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F	Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U1 - Unit 2 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-076-U1 - Unit 2 Cable Tunnel - Train B NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-12), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain normal control of the service water system, and to restore PORV instrument air by hand wheel operation of valve NIP19HV3885-B thus ensuring PORV QIB31PCV0445A-A will be operable to achieve RCS depressurization.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-12), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between auxiliary building (area 2-030) and cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-9), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between auxiliary building (Fire Area 2-030) and cable tunnel (Fire Area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries either have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-25), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

Fire Area ID: 2-076-U1 - Unit 2 Cable Tunnel - Train B Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 2-26), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in letters dated 11/19/1985 and 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain normal control of the service water system and regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 2-26), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in letters dated 11/19/1985 and 12/29/1986:</p> <ul style="list-style-type: none"><li>• The fire-resistant coatings on the watertight door between the auxiliary building (area 2-030) and the cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U1 - Unit 2 Cable Tunnel - Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-076-U1	Unit 2 Cable Tunnel - Train B	E	—	E, B	FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/NA-2-076/30-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-TUNNEL B/NA-2-076/30-155-2: -- Barrier: Required to support a fire area boundary evaluation. U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to meet EEEE criteria. Water Suppression, WS-2D-98-1: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U2 - Unit 2 Cable Tunnel - Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
2-076-U2	Unit 2 Cable Tunnel - Train B	

## Fire Safety Analysis

**Fire Area ID:** 2-076-U2 - Unit 2 Cable Tunnel - Train B  
**Fire Zone ID:** 2-076-U2 - Unit 2 Cable Tunnel - Train B

**Systems and Features**

### Extinguishers

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### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2Y43D001P	Hose Station - N2Y43D001P-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001Q	Hose Station - N2Y43D001Q-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001R	Hose Station - N2Y43D001R-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001S	Hose Station - N2Y43D001S-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001T	Hose Station - N2Y43D001T-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001U	Hose Station - N2Y43D001U-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001V	Hose Station - N2Y43D001V-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001W	Hose Station - N2Y43D001W-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001X	Hose Station - N2Y43D001X-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001Y	Hose Station - N2Y43D001Y-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D001Z	Hose Station - N2Y43D001Z-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D002A	Hose Station - N2Y43D002A-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2Y43D002B	Hose Station - N2Y43D002B-FZ 76 Room TUNNEL B	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

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### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2D-98-1	Wet Pipe Sprinkler System, U2-76, Diesel Building Cable Tunnel Train B, Room 2076	-	Yes		Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U2 - Unit 2 Cable Tunnel - Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-076-U2 - Unit 2 Cable Tunnel - Train B	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1 D732-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2 D732-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1 D733-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2 D733-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1 2235-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2 2235-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-76-NA-76-Restricted transient controls	-	Yes	-- E: Required to meet EEEE criteria.	-	-

## Fire Safety Analysis

**Fire Area ID:** 2-076-U2 - Unit 2 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with performance-based approach Train A PORV for pressure reduction and Pressurizer Heater Group A for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump supplying Steam Generator 2A. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2, RCS wide range pressure for Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2. 4. RCS Temperature - RCS Loop 1/Loop 2 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A equipment.	

## Fire Safety Analysis

**Fire Area ID:** 2-076-U2 - Unit 2 Cable Tunnel - Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.2 Vital Auxiliaries – Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U2 - Unit 2 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U2 - Unit 2 Cable Tunnel - Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	



## Fire Safety Analysis

Fire Area ID: Compliance Basis:	2-076-U2 - Unit 2 Cable Tunnel - Train B NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	Previously Approved Engineering Evaluations
<b>Licensing Action</b>	Appendix R Exemption (No. 1-12), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076, Unit 1 cables), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• Manual actions can be performed to regain normal control of the service water system, and to restore PORV instrument air by hand wheel operation of valve NIP19HV3885-B thus ensuring PORV QIB31PCV0445A-A will be operable to achieve RCS depressurization.</li> </ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-12), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between auxiliary building (area 2-030) and cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-9), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030, Unit 1 cables), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The fire-resistant coatings on the watertight door between auxiliary building (Fire Area 2-030) and cable tunnel (Fire Area 2-076) have been placed under the licensee's fire protection surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries either have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-25), Unit 2 Auxiliary Building Cable Chase Train B (Fire Area 2-030), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating , which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"> <li>• Fire resistant coating on a door has been placed in a surveillance program.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

Fire Area ID: 2-076-U2 - Unit 2 Cable Tunnel - Train B Compliance Basis: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions		Previously Approved Engineering Evaluations
Licensing Action	Appendix R Exemption (No. 2-26), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076), Enclosure of one train of redundant cable by a 1 hour rated fire barrier (III.G.2.c criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier, which was approved by the NRC in letters dated 11/19/1985 and 12/29/1986:</p> <ul style="list-style-type: none"><li>• Manual actions can be performed to regain normal control of the service water system and regain the control of the pressurizer power operated relief valves (PORVs) and the transfer relays for the PORVs and the head vent valves.</li></ul> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	
Licensing Action	Appendix R Exemption (No. 2-26), Unit 2 Auxiliary Building to Diesel Building Cable Tunnel Train B (Fire Area 2-076), lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in letters dated 11/19/1985 and 12/29/1986:</p> <ul style="list-style-type: none"><li>• The fire-resistant coatings on the watertight door between the auxiliary building (area 2-030) and the cable tunnel (area 2-076) have been placed under the licensee's fire protection surveillance program.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-076-U2 - Unit 2 Cable Tunnel - Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	<p>Modifications:</p> <p>-- Risk: Modification to replace trip device in panel Q2R42B0001B, breaker LB07.</p> <p>Procedures/Recovery Actions:</p> <p>-- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.</p>
2-076-U2	Unit 2 Cable Tunnel - Train B	—	—	E, B	<p>FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-S-TUNNEL B/DGB-1-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-1: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL B/DGB-2-076/56C-155-2: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL B/NA-2-076/30-155-1: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-TUNNEL B/NA-2-076/30-155-2: -- Barrier: Required to support a fire area boundary evaluation.</p> <p>U2-76-NA-76-Restricted transient controls: -- EEEE/LA: Required to meet EEEE criteria.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-CST	Condensate Storage Tank	

## Fire Safety Analysis

Fire Area ID: 2-077 - Condensate Storage Tank  
Fire Zone ID: 2-CST - Condensate Storage Tank

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 2-077 - Condensate Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-CST	Condensate Storage Tank	—	—	—	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-RWMT	Reactor Makeup Storage Tank	

## Fire Safety Analysis

Fire Area ID: 2-078 - Reactor Makeup Storage Tank  
Fire Zone ID: 2-RWMT - Reactor Makeup Storage Tank

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-078 - Reactor Makeup Storage Tank  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-RWMT	Reactor Makeup Storage Tank	—	—	—	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

Fire Safety Analysis

Fire Area ID:	2-079 - Refueling Water Storage Tank	Fire Area Definition
Compliance Basis:	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-RWST	Refueling Water Storage Tank	



## Fire Safety Analysis

Fire Area ID: 2-079 - Refueling Water Storage Tank  
Fire Zone ID: 2-RWST - Refueling Water Storage Tank

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-079 - Refueling Water Storage Tank  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-RWST	Refueling Water Storage Tank	—	—	—	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-080A	Main Transformer No. 3	
2-080B	Main Transformer No. 2	
2-080C	Main Transformer No. 1	
2-080D	Main Transformer (Spare)	
2-080E	Unit Aux Transformer (Spare Cubicle)	
2-080F	Unit Aux Transformer 2B	
2-080G	Startup Aux Transformer No. 2B	
2-080H	Startup Aux Transformer No. 2A	
2-080K	Low Voltage Switchyard - General Area, Unit 2	

## Fire Safety Analysis

Fire Area ID: 2-080 - Low Voltage Switchyard - Unit 2  
Fire Zone ID: 2-080A - Main Transformer No. 3

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-64-1	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Main Transformer No. 3, Room 2080A	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80A-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80A-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-080 - Low Voltage Switchyard - Unit 2  
Fire Zone ID: 2-080B - Main Transformer No. 2

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-66-1	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Main Transformer No. 2, Room 2080B	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80B-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

Fire Area ID: 2-080 - Low Voltage Switchyard - Unit 2  
Fire Zone ID: 2-080C - Main Transformer No. 1

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-66-2	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Main Transformer No. 1, Room 2080C	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80C-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80C-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Fire Zone ID:** 2-080D - Main Transformer (Spare)

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-64-2	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Main Transformer Spare, Room 2080D	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80D-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80D-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-080 - Low Voltage Switchyard - Unit 2	Systems and Features
Fire Zone ID:	2-080E - Unit Aux Transformer (Spare Cubicle)	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80E-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80E-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: 2-080 - Low Voltage Switchyard - Unit 2  
Fire Zone ID: 2-080F - Unit Aux Transformer 2B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-67-1	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Unit Auxiliary Transformer 2B, Room 2080F	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80F-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80F-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Fire Zone ID:** 2-080G - Startup Aux Transformer No. 2B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-69-1	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Startup Auxiliary Transformer 2B, Room 2080G	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80G-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80G-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Fire Zone ID:** 2-080H - Startup Aux Transformer No. 2A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2TR-65-1	Dry Pipe and Wet Pipe Sprinkler Systems, U2-080, Startup Aux Transformer No. 2A, Room 2080H	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80H-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80H-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Fire Zone ID:** 2-080K - Low Voltage Switchyard - General Area, Unit 2

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-80K/OUTSIDE-U1-80/U2-80-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-80K/OUTSIDE-U2-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/80K-85B/228-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-80-NA-80K-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-80-NA-80K-Curbs	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. Each outdoor deluge system provides local protection for individual transformers, and are designed (using curbs, etc.) so water will remain in the vicinity of the affected equipment. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment G Code Compliance Evaluation for NFPA 15, 2007 Edition, Water Spray Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 15, 2007 Edition and NFPA 15, 1973 Edition. The approach was to determine the applicable code editions for the water spray systems, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the applicable codes
- The water spray systems were determined to be compliant with the relevant sections of NFPA 15-2007 and NFPA 15-1973, with the exception of the non-compliances identified in the evaluations
- Some non-compliances against the 2007 Edition were resolved by vetting against the 1973 Edition, which has been identified by SNC as the FNP code of record
- All other non-compliances have been provided with justifications

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-080A	Main Transformer No. 3	E	—	E	Combustibles and flammable liquid control, U2-80-NA-80A-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80A-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-64-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080B	Main Transformer No. 2	E	—	E	Curbs, U2-80-NA-80B-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-66-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080C	Main Transformer No. 1	E	—	E	Combustibles and flammable liquid control, U2-80-NA-80C-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80C-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-66-2: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080D	Main Transformer (Spare)	E	—	E	Combustibles and flammable liquid control, U2-80-NA-80D-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80D-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-64-2: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080E	Unit Aux Transformer (Spare Cubicle)	—	—	E	Combustibles and flammable liquid control, U2-80-NA-80E-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80E-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080F	Unit Aux Transformer 2B	E	—	E	Combustibles and flammable liquid control, U2-80-NA-80F-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80F-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-67-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080G	Startup Aux Transformer No. 2B	E	—	E	Combustibles and flammable liquid control, U2-80-NA-80G-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80G-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-69-1: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-080 - Low Voltage Switchyard - Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-080H	Startup Aux Transformer No. 2A	E	—	E	Combustibles and flammable liquid control, U2-80-NA-80H-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80H-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. Water Suppression, WS-2TR-65-1: -- EEEE/LA: Required to support a fire area boundary evaluation.
2-080K	Low Voltage Switchyard - General Area, Unit 2	—	—	E, B	Combustibles and flammable liquid control, U2-80-NA-80K-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Curbs, U2-80-NA-80K-Curbs: -- EEEE/LA: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-80K/OUTSIDE-U1-80/U2-80-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-80K/OUTSIDE-U2-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/80K-85B/228-155: -- Barrier: Required to support a fire area boundary evaluation.

Fire Safety Analysis

Fire Area ID:	2-081 - Turbine Building Battery Room	Fire Area Definition
Compliance Basis:	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-081	Turbine Building Battery Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-081 - Turbine Building Battery Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-081 - Turbine Building Battery Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2T-16E-1	U2-81 Detection System 2T-16E-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-81/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-81/Stairwell-N-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-81/85C-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-81/85A-137 T2002	0:00,	-	Yes		Yes	-
U2-FNP-N-U2 TURB/U2 TURB-81/Stairwell-N-137 T2003	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-081 - Turbine Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-081 - Turbine Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-081 - Turbine Building Battery Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-081 - Turbine Building Battery Room  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-081 - Turbine Building Battery Room	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
2-081	Turbine Building Battery Room	—	E, R, N	—	Detection System, 2T-16E-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-81/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-81/Stairwell-N-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-81/85C-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-089 - Lube Oil & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2150	2150 Lube Oil Storage/Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-089 - Lube Oil & Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2150 - 2150 Lube Oil Storage/Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-120-1	U2-89 Detection System 2A-120-1 Room 2150	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2A-120-1	Dry Powder system in Fire Area 89 , room number 2150, Aux Building Oil Storage Room	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2150/2207-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2150/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2150/2160-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2150-S08/89-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-2150/2160-89/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2150/2207-89/4-100: 2-100-114-05	0:00, C. of 2150	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2150/2207-89/4-100: 2-100-114-06	0:00, C. of 2150	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2150/2160-89/4-100 2185	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-089 - Lube Oil & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-089 - Lube Oil & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-089 - Lube Oil & Combustible Storage Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-089 - Lube Oil & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-089 - Lube Oil & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2150	2150 Lube Oil Storage/Combustible Storage Room	—	E, R, D	—	Detection System, 2A-120-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2150/2207-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2150/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2150/2160-89/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2150-S08/89-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2150/2160-89/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2107	2107 Combustible Storage/Filter Unit Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-090 - Aux Building Combustible Storage & Filter Unit Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2107 - 2107 Combustible Storage/Filter Unit Room	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A82	Aux.Bldg.-83'-Storage Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-100-7	U2-90 Detection System 2A-100-7 Room 2107	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2107/2165-90/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2107/2106-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2107/2108-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2107/2103-90/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2107/OUTSIDE-90/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2107/2165-90/4-100: 2-083-111-05	0:00, F. of 2165	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2107/2106-90/1-83: 2-083-111-02	0:00, W. of 2106	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2107/2108-90/1-83: 2-083-111-01	0:00, S. of 2108	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2107/2103-90/1-83: 2-083-111-03	0:00, N. of 2103	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2107/2103-90/1-83: 2-083-111-04	0:00, S. of 2107	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2107/2103-90/1-83 2102	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Fire Zone ID:** 2107 - 2107 Combustible Storage/Filter Unit Room

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.



## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-090 - Aux Building Combustible Storage & Filter Unit Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2107	2107 Combustible Storage/Filter Unit Room	—	E, R, D	—	Detection System, 2A-100-7: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2107/2165-90/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2107/2106-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2107/2108-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2107/2103-90/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2107/OUTSIDE-90/YARD-83: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2420	2420 Drum Storage/Combustible Storage Room	
2421	2421 Drumming Station/Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-092 - Drumming Station & Storage & Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2420 - 2420 Drum Storage/Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-56-1	U2-92 Detection System 2A-56-1 Room 2420	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-
2A-56-2	U2-92 Detection System 2A-56-2 Room 2421	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2330/2420-4/92-139	3:00, , U2 3 hr. Rated Ceiling at ele 139 between Rooms 2330/2420 and fire areas 4/92	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2604/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2605/2420-4/92-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2605/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-2609/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2421/2422-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2478/2420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2420-S08/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2420/2405-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2421/2405-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2420-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2445/2421-4/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2420/2419-92/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2467/2421-4/92-165	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2421-S10/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2421/2422-92/4-155: 2-155-131-05	0:00, E. of 'B' SFP HEAT EXCH. RM	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2421/2422-92/4-155: 2-155-131-06	0:00, E. of 'B' SFP HEAT EXCH. RM	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2420-S08/92-155: 2-155-131-03	0:00, S. of 2420	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-092 - Drumming Station & Storage & Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2420 - 2420 Drum Storage/Combustible Storage Room	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-2421/2405-92/4-155: 2-155-131-04	0:00, S. of 2421	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	2-092 - Drumming Station & Storage & Combustible Storage Room	Systems and Features
Fire Zone ID:	2421 - 2421 Drumming Station/Combustible Storage Room	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

**Fire Area ID:** 2-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-092 - Drumming Station & Storage & Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2420	2420 Drum Storage/Combustible Storage Room	—	E, R	—	<p>Detection System, 2A-56-1:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>Detection System, 2A-56-2:  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-CEILING-2330/2420-4/92-139:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2604/2421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2605/2420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2605/2421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2609/2421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2421/2422-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2478/2420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 8/2420-S08/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2420/2405-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2421/2405-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2445/2420-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2445/2421-4/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2420/2419-92/4-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2467/2421-4/92-165:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-STAIR 10/2421-S10/92-155:  -- Barrier: Required to support a fire area boundary evaluation.</p>
2421	2421 Drumming Station/Combustible Storage Room	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** 2-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2167	2167 Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-094 - Aux Building Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2167 - 2167 Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-119-1	U2-94 Detection System 2A-119-1 Room 2167	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2108/2167-1/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2167/2225-94/20-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2167/2226-94/19-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2166/2167-4/94-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2167/2168-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2167/2185-94/6-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2167/2164-94/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2167/2185-94/6-100: 2-100-113-01	0:00, N. of 2167	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2167/2185-94/6-100: 2-100-113-02	0:00, N. of 2167	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2167/2185-94/6-100 2166	0:00,	-	Yes		Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment E Code Compliance Evaluation for NFPA 13, 2007 Edition, Wet Pipe Sprinkler Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the wet pipe sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li><li>• The wet pipe sprinkler systems were determined to be compliant with the relevant sections of the codes, with the exception of the non-compliances identified in the report</li><li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li><li>• All other non-compliances were provided with justifications, or SNC has initiated actions to make document revisions or modifications to bring the element into compliance</li></ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>



## Fire Safety Analysis

**Fire Area ID:** 2-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-094 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2167	2167 Combustible Storage Room	—	E, R, D	—	Detection System, 2A-119-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2108/2167-1/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2167/2225-94/20-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2167/2226-94/19-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2166/2167-4/94-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2167/2168-94/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2167/2185-94/6-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2167/2164-94/4-100: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2179	2179 Combustible Storage Room	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-096 - Aux Building Combustible Storage Room	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2179 - 2179 Combustible Storage Room	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-101-9	U2-96 Detection System 2A-101-9 Room 2179	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2A-101A-1	Precision Sprinkler System, U2-96, Combustible Storage Room, Room 2179	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2179/2220-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2179/2231-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2179/OUTSIDE-96/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2179/2187-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2177-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2178-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2179/2180-96/4-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2179/2187-96/4-100: 2-100-114-01	0:00, S. of 2187	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2177-96/4-100: 2-100-114-03	0:00, N. of 2177	-	-	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2179/2178-96/4-100: 2-100-114-04	0:00, N. of 2178	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2179/2180-96/4-100: 2-100-114-02	0:00, W. of 2179	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2179/2180-96/4-100 2184	0:00,	-	Yes		Yes	-

Fire Safety Analysis

Fire Area ID:	2-096 - Aux Building Combustible Storage Room	Systems and Features
Fire Zone ID:	2179 - 2179 Combustible Storage Room	

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 2-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-096 - Aux Building Combustible Storage Room	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment D	Code Compliance Evaluation for NFPA 13, 2007 Edition, Preaction Sprinkler Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>Evaluations were conducted to determine the current level of compliance with the applicable requirements of NFPA 13, 2007 Edition and NFPA 13, 1975 Edition. The approach was to determine the applicable code editions for the preaction sprinkler systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the applicable codes</li> <li>• The preaction sprinkler systems were determined to be compliant with the relevant sections of NFPA 13-2007 and NFPA 13-1975, with the exception of the non-compliances identified in the evaluations</li> <li>• Some non-compliances against the 2007 Edition were resolved by vetting against the 1975 edition, which has been identified by SNC as the FNP code of record</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions to bring the element into compliance</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-096 - Aux Building Combustible Storage Room  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2179	2179 Combustible Storage Room	E	E, R, D	—	<p>Detection System, 2A-101-9:  -- DID: Required to meet DID criteria.  -- EEEE/LA: Required to support an Engineering Evaluation.  -- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-2179/2220-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2179/2231-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2179/OUTSIDE-96/YARD-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2179/2187-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2179/2177-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-2179/2178-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2179/2180-96/4-100:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>Water Suppression, WS-2A-101A-1:  -- EEEE/LA: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2404	2404 Filter Hatch Room/Combustible Storage Area	

## Fire Safety Analysis

**Fire Area ID:** 2-097 - Filter Hatch Room & Combustible Storage Area  
**Fire Zone ID:** 2404 - 2404 Filter Hatch Room/Combustible Storage Area

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-112-2	U2-97 Detection System 2A-112-2 Room 2404	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2404/404-U2-97/U1-97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2301/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2302/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2303/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2304/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2305/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2311/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2313/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2314/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2315/2404-4/97-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2404/2405-97/4-155: 2-155-122-12	0:00, E. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2404/2405-97/4-155: 2-155-122-13	0:00, E. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155: 2-155-122-10	0:00, N. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155: 2-155-122-11	0:00, N. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-08	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2404/2403-97/4-155: 2-155-122-09	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-097 - Filter Hatch Room & Combustible Storage Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2404 - 2404 Filter Hatch Room/Combustible Storage Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2404/2403-97/4-155: 2-155-122-14	0:00, W. of 2404	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-S-2404/404-U2-97/U1-97-155 496	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2404/2409-97/4-155 2408	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-097 - Filter Hatch Room & Combustible Storage Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M	Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment O	Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-097 - Filter Hatch Room & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2404	2404 Filter Hatch Room/Combustible Storage Area	—	E, R, D	—	<p>Detection System, 2A-112-2:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>FireBarrier, U0-FNP-S-2404/404-U2-97/U1-97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2301/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2302/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2303/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2304/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2305/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2311/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2313/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2314/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2315/2404-4/97-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-2404/2405-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-2404/2409-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-W-2404/2403-97/4-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2447	2447 Caskwash Storage Area Combustible Storage Area	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-098 - Caskwash Storage & Combustible Storage Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2447 - 2447 Caskwash Storage Area Combustible Storage Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-107-10	U2-98 Detection System 2A-107-10 Room 2447	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2447/2446-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2447/2348-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2447/2445-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2447/2448-98/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2447/2446-98/4-155: 2-155-132-02	0:00, E. of 2447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2447/2448-98/4-155: 2-155-132-01	0:00, W. of 2447	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2447/2348-98/4-155 2434	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump, or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in adjacent areas. Essential equipment is protected from damage due to flooding from operation of the fire suppression system by drains and curbs and/or by mounting essential equipment on pedestals or supports. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance

**Engineering Evaluation ID** ENGDOC, SM-C051326701-007, Attachment O Code Evaluation for NFPA 90A, 2002 Edition, Installation of Air Conditioning and Ventilating Systems

**Inactive** No

**Functionally Equivalent** Yes

**Adequate for the Hazard** No

**Summary** Purpose:

This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 90A, 2002 Edition. The approach was to determine the applicable code edition for the applicable fire dampers, identify applicable sections of the code requiring verification, and perform those verifications.

Bases for Acceptability:

- An applicability determination was completed to identify the relevant sections of the code
- Fire dampers were determined to be compliant with the relevant sections of NFPA 90A, 2002 Edition, with the exception of the non-compliances identified in Table 6-1 of the report
- Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2002 edition non-compliances against the FNP code of record edition of 1974.
- All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.

## Fire Safety Analysis

**Fire Area ID:** 2-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

**Fire Area ID:** 2-098 - Caskwash Storage & Combustible Storage Area  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2447	2447 Caskwash Storage Area Combustible Storage Area	—	E, R, D	—	Detection System, 2A-107-10: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2447/2446-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2447/2348-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2447/2445-98/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2447/2448-98/4-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-DU-ABVB-A	Aux Building to Valve Box Ductbanks, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-AII-NA/OUTSIDE-DU-ABVB-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/2478-DU-ABVB-A/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB3-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB4-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB1-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-DU-ABVB-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal charging using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-ABVB-A - Aux Building to Valve Box Ductbanks, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-DU-ABVB-A	Aux Building to Valve Box Ductbanks, Train A	—	—	R, B	FireBarrier, U2-FNP-All-NA/OUTSIDE-DU-ABVB-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/2478-DU-ABVB-A/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB3-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB4-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB1-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-DU-ABVB-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-DU-ABVB-B	Aux Building to Valve Box Ductbanks, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-AII-NA/OUTSIDE-DU-ABVB-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB1-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB3-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/NA-DU-ABVB-B/2-SVB4-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/2478-DU-ABVB-B/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-DU-ABVB-B/2-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-DU-ABVB-B-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-ABVB-B - Aux Building to Valve Box Ductbanks, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-DU-ABVB-B	Aux Building to Valve Box Ductbanks, Train B	—	—	R, B	FireBarrier, U2-FNP-All-NA/OUTSIDE-DU-ABVB-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB1-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB3-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/NA-DU-ABVB-B/2-SVB4-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/2478-DU-ABVB-B/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-DU-ABVB-B/2-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-DU-ABVB-B-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-DU-DGRWIS-A	Diesel Building to RWIS Ductbank, Unit 2, Train A	



## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A  
**Fire Zone ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-A/68-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-2-DU-DGRWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-AII-NA/OUTSIDE-2-DU-DGRWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-A - Diesel Building to RWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-DU-DGRWIS-A	Diesel Building to RWIS Ductbank, Unit 2, Train A	—	—	—	FireBarrier, U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-A/68-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-2-DU-DGRWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-AII-NA/OUTSIDE-2-DU-DGRWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

Fire Safety Analysis

Fire Area ID:	2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B	Fire Area Definition
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-DU-DGRWIS-B	Diesel Building to RWIS Ductbank, Unit 2, Train B	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B  
**Fire Zone ID:** 2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-B/67-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-S-NA/DGB-2-DU-DGRWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGRWIS-B - Diesel Building to RWIS Ductbank, Unit 2, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-DU-DGRWIS-B	Diesel Building to RWIS Ductbank, Unit 2, Train B	—	—	—	FireBarrier, U0-FNP-E-NA/RVR INTK-2-DU-DGRWIS-B/67-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/DGB-2-DU-DGRWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-DU-DGSWIS-A	Diesel Building to SWIS Ductbank, Unit 2, Train A	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A  
**Fire Zone ID:** 2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/DGB-2-DU-DGSWIS-A/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-A/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"> <li>Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li> <li>Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li> </ul>	

## Fire Safety Analysis

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<b>Fire Area ID:</b>	2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

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### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-A - Diesel Building to SWIS Ductbank, Unit 2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-DU-DGSWIS-A	Diesel Building to SWIS Ductbank, Unit 2, Train A	—	—	—	FireBarrier, U0-FNP-N-NA/DGB-2-DU-DGSWIS-A/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-A/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-DU-DGSWIS-B	Diesel Building to SWIS Ductbank, Unit 2, Train B	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B  
**Fire Zone ID:** 2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/DGB-2-DU-DGSWIS-B/71-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-B/72-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"> <li>Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li> <li>Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li> </ul>	

## Fire Safety Analysis

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<b>Fire Area ID:</b>	2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B	<b>Nuclear Safety Performance Goals</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

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### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-DU-DGSWIS-B - Diesel Building to SWIS Ductbank, Unit 2, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-DU-DGSWIS-B	Diesel Building to SWIS Ductbank, Unit 2, Train B	—	—	—	FireBarrier, U0-FNP-N-NA/DGB-2-DU-DGSWIS-B/71-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/DGB-2-DU-DGSWIS-B/72-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-EMBED-AB	Embedded Conduit, Auxiliary Building, Unit 2	

Fire Safety Analysis

Fire Area ID:	2-EMBED-AB - Aux Building Embedded Conduit	Systems and Features
Fire Zone ID:	2-EMBED-AB - Embedded Conduit, Auxiliary Building, Unit 2	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained in this area due to embedded conduits. Cables in embedded conduits are protected from adverse conditions occurring due to fire suppression effects. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-EMBED-AB - Aux Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

Fire Safety Analysis

Fire Area ID: 2-EMBED-AB - Aux Building Embedded Conduit

Compliance Basis: NFPA 805, Section 4.2.3 Deterministic Approach

Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-EMBED-AB	Embedded Conduit, Auxiliary Building, Unit 2	—	—	—	—

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S01 - Stairwell No. 1	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-S01	Stairwell No. 1	



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S01 - Stairwell No. 1	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S01 - Stairwell No. 1	

### Extinguishers

—

### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2V43D107	Hose Station - N2V43D107-FZ 6 Room 2189	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2V43D108	Hose Station - N2V43D108-FZ 6 Room 2185	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-110-5	U2-S01 Detection System 2A-110-5 Room Stair 01	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2249-S01/30-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2249-S01/30-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2241-S01/6-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/2462-S01/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2111-S02/1-83	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-STAIR 1/2190-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2241-S01/6-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2241-S01/6-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/2462-S01/43-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2234-S01/20-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2185-S01/6-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2234-S01/20-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2235-S01/23-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2345-S01/42-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2346-S01/41-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2452-S01/43-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S01 - Stairwell No. 1	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S01 - Stairwell No. 1	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 1/2503-S01/54-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 1/Elev 1-S01/S01-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 1/Elev 1-S01/S01-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 1/Elev 1-S01/S01-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 1/Elev 4-S01/S01-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 1/2185-S01/6-100 2169	0:00,	-	Yes		Yes	-
U2-FNP-N-STAIR 1/2190-S01/6-100 2170	0:00,	-	Yes		Yes	-
U2-FNP-N-STAIR 1/2241-S01/6-121 2330	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2185-S01/6-100 Elev. No. 4 (1)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2234-S01/20-121 Elev. No. 4 (2)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2345-S01/42-139 Elev. No. 4 (3)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 4/2452-S01/43-155 Elev. No. 4 (4)	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/2234-S01/20-121 2225	0:00,	-	Yes		Yes	-
U2-FNP-S-STAIR 1/2345-S01/42-139 2328	0:00,	-	Yes		Yes	-
U2-FNP-S-STAIR 1/2452-S01/43-155 2439	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-S01-AUX BUILDING-STAIR 01-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-S01 - Stairwell No. 1  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-S01 - Stairwell No. 1  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S01 - Stairwell No. 1	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li> </ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b> <b>Compliance Basis:</b>	2-S01 - Stairwell No. 1 Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	<b>Previously Approved Engineering Evaluations</b>
<b>Licensing Action</b>	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"> <li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li> <li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li> <li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li> <li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li> <li>• Access to fire doors is routinely kept clear.</li> <li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li> <li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
<b>Licensing Action</b>	Appendix R Exemption (No. 2-35), Unit 2 Auxiliary Building, Elevations 100, 121, 127, 139, 155 and 175 ft. (Fire Area 2-006), ack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 and 10/18/1985 APC letters to the NRC provide the following justification for the lack of enclosure of one train of redundant cable by a 1 hour rated fire barrier with automatic fire suppression, which was approved by the NRC in a letter dated 12/29/1986 for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating:</p> <p>A non fire-rated, watertight door # 2170 exists between fire area 2-006, room 2190 and fire area 2-S01, Stairwell # 1; and a non fire-rated, pressure tight door # 2330 exists between fire area 2-006, room 2241 and fire area 2-S01, Stairwell # 1.</p> <ul style="list-style-type: none"> <li>• These doors are normally maintained closed. Smoke detection system is provided in rooms on both sides of these doors.</li> <li>• The smoke detection system in rooms 2190 and 2241 alarms locally and are annunciated in the main control room and will provide early warning of a pending fire condition, prompting a fire brigade response. The smoke detection system in stairwell # 1 is provided with only local alarm.</li> <li>• Portable extinguishers and fire hose cabinets are available nearby for fire brigade's use in stairwell # 1.</li> <li>• An automatic fire suppression system is provided in room 2190.</li> <li>• The combustible loading in room 2241 (main steam valve room) is less than 30 minutes and access to this area during plant operation is restricted. Based on the configuration and fire protection provided, a fire on either side of these doors will not propagate to the adjacent fire area.</li> </ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S01 - Stairwell No. 1	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-S01	Stairwell No. 1	—	E, R, D, S	E, B	<p>Detection System, 2A-110-5:</p> <p>-- DID: Required to meet DID criteria.</p> <p>-- EEEE/LA: Required to support an Engineering Evaluation.</p> <p>-- Risk: Required to meet Risk criteria.</p> <p>-- Separation: Required to meet Separation criteria.</p> <p>FireBarrier, U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2185-S01/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2249-S01/30-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2249-S01/30-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/2452-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-Elev 4/2190-S01/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-Elev 4/2241-S01/6-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-Elev 4/2462-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-Elev 4/OUTSIDE-S01/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 1/2111-S02/1-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 1/2190-S01/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 1/2241-S01/6-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 1/2241-S01/6-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 1/2462-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-Elev 4/2185-S01/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-Elev 4/2234-S01/20-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-Elev 4/2345-S01/42-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-Elev 4/2452-S01/43-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U2-FNP-S-STAIR 1/2185-S01/6-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-S01 - Stairwell No. 1  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-S-STAIR 1/2234-S01/20-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2235-S01/23-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2345-S01/42-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2346-S01/41-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/2452-S01/43-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 1/2503-S01/54-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 1/Elev 1-S01/S01-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 1/Elev 1-S01/S01-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 1/Elev 1-S01/S01-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 1/Elev 4-S01/S01-100: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-S01-AUX BUILDING-STAIR 01-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.



Fire Safety Analysis

Fire Area ID:	2-S02 - Stairwell No. 2	Fire Area Definition
Compliance Basis:	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
	Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-S02	Stairwell No. 2	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S02 - Stairwell No. 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S02 - Stairwell No. 2	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
A71	Aux.Bldg.-121'-Stairway West RCA	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2A-108-2	U2-S02 Detection System 2A-108-2 Room Stair 02	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria. -- S: Required to meet Separation criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

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### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-Elev 2/2111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-STAIR 2/2162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/2429-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 2/Elev 2-S02/S02-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2215/STAIR 2-4/S02-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 2/2111-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-N-STAIR 2/2115-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2125-S02/1-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2223-S02/1-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2334-S02/34-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2429-S02/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2184/STAIR 2-1/S02-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 2/OUTSIDE-S02/YARD-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2162-S02/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2209-S02/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2215-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2215-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2322-S02/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2409-S02/4-155	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2110-S02/1-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2169-S02/1-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2224-S02/18-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2318-S02/40-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S02 - Stairwell No. 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S02 - Stairwell No. 2	

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-STAIR 2/2115-S02/1-83 2105	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2223-S02/1-121 2214	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 2/2429-S02/4-155 2447	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2162-S02/4-100 2159	0:00,	-	Yes		Yes	-
U2-FNP-S-STAIR 2/2209-S02/4-121 2212	0:00,	-	Yes		Yes	-
U2-FNP-S-STAIR 2/2322-S02/4-139 2316	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/2409-S02/4-155 2411	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 2/2110-S02/1-83 2104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
ENCLOSURE3	0:00	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-S02-AUX BUILDING-STAIR 02-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation. -- D: Required to meet DID criteria.	Yes	-
U2-S02-AUX BUILDING-STAIR 02-Three Hour Rated Enclosure	-	Yes	-- R: Required to meet Risk criteria. -- S: Required to support the NSCA.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 2-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S02 - Stairwell No. 2	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	ENGDOC, U-732257 Qualification of Three-Hour Rated Stairwell Enclosures
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>The purpose of the evaluation was to demonstrate the acceptability of three Promat H cement board enclosures constructed inside stairwells (two enclosures in Unit 1, Stairwell #2, and one enclosure in Unit 2, Stairwell #2) to provide separation and protection for various safety related circuits running through the stairs.</p> <p>Bases for Acceptability:</p> <p>The evaluation demonstrates that the three enclosures are functionally equivalent to three-hour fire resistance rated enclosures by comparing the FNP installations to Promat H assemblies that passed the three-hour fire resistance rating ASTM E-119 test.</p>

## Fire Safety Analysis

**Fire Area ID:** 2-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

		Previously Approved Engineering Evaluations
Fire Area ID:	2-S02 - Stairwell No. 2	
Compliance Basis:	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	
Licensing Action	Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)	
Licensing Basis	<p>Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:</p> <ul style="list-style-type: none"><li>• The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.</li><li>• Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.</li><li>• Smoke or heat detection systems are installed on both sides of the affected doors except as noted.</li><li>• The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.</li><li>• Access to fire doors is routinely kept clear.</li><li>• Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.</li><li>• The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	
Licensing Action	Appendix R Exemption (No. 2-38), Multiple fire areas, Enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier (III.G.2 criteria)	
Licensing Basis	<p>Exemption request per 03/13/1985 and 10/18/ 1985 APC letters to the NRC provide the following justification for the lack of enclosure of structural steel supporting raceway fire barrier assemblies by a 1 hour fire rated barrier, which was approved by the NRC in a letter dated 12/29/1986:</p> <p>All safety-related tray and conduit supports which support raceways that are protected by a fire barrier were evaluated to determine the effects of a one hour ASTM E-119 exposure fire on the subject supports. The assumptions were:</p> <ul style="list-style-type: none"><li>• Maximum temperature attained in the area of fire influence is 1700°F for approximately one hour.</li><li>• The maximum area of fire influence is equal to that of a fire with a base of 20 feet in diameter.</li><li>• The weld strength is equivalent to that of the structural supporting steel material.</li><li>• A seismic event is not postulated to occur concurrently with the fire.</li></ul> <p>Utilizing the properties of steel at elevated temperatures, it was determined that the structural steel supports affected by the area of fire influence were of adequate strength to ensure that the raceway will retain their integrity for the required one hour fire duration.</p> <p>This exemption is no longer required because the fire risk evaluation, SE-C051326701-008, has found that the fire area is compliant with NFPA 805 Section 4.2.4.</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S02 - Stairwell No. 2	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Licensing Action** Appendix R Exemption (No. 2-4), Unit 2 Auxiliary Building Stairwell No. 2 (Fire Area 2-S02), Installation of automatic fire suppression (III.G.2.c criteria)

**Licensing Basis** Exemption request per 03/13/1985 APC letters to the NRC provides the following justification for the lack of automatic fire suppression, which was approved by the NRC in a letter dated 11/19/1985:

- Redundant safe shutdown cabling has been enclosed in a fire barrier
- Smoke detection system has been provided.
- The in-situ combustible fire loading is low and consists only of cable insulation with a maximum fire severity of less than 1 hour.
- All non-safe shutdown cables in this fire area are enclosed in conduit.

Elimination of the reliance on Kaowool raceway fire barriers in this area is resolved by DCP 03-2-9938 and DCP 02-3-9899.

In conclusion, the bases for previous acceptance have been substantiated by field walkdown and by verification of change implementation.

This exemption is no longer required because the fire risk evaluation, SE-C051326701-008 has found that the fire area is compliant with NFPA 805, Section 4.2.4.

## Fire Safety Analysis

**Fire Area ID:** 2-S02 - Stairwell No. 2  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-S02	Stairwell No. 2	—	E, R, D, S, N	E, R, D, S, B	Detection System, 2A-108-2: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. -- NPO: Required to meet NPO criteria. ERFBS, ENCLOSURE3: -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-Elev 2/2111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/2429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 2/Elev 2-S02/S02-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2215/STAIR 2-4/S02-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 2/2111-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2115-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2125-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2223-S02/1-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2334-S02/34-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 2/2429-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2184/STAIR 2-1/S02-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2162-S02/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2209-S02/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2215-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2215-S02/4-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S02 - Stairwell No. 2	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2322-S02/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/2409-S02/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2110-S02/1-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2169-S02/1-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2224-S02/18-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 2/2318-S02/40-139: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-S02-AUX BUILDING-STAIR 02-Restricted transient controls: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support a fire area boundary evaluation. Three Hour Rated Enclosure, U2-S02-AUX BUILDING-STAIR 02-Three Hour Rated Enclosure: -- Risk: Required to meet Risk criteria. -- Separation: Required to support the NSCA.

Fire Safety Analysis

Fire Area ID:	2-S08 - Stairwell No. 8	Fire Area Definition
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-S08	Stairwell No. 8	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S08 - Stairwell No. 8	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S08 - Stairwell No. 8	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2208/STAIR 8-4/S08-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2220/STAIR 8-4/S08-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-Ceiling-STAIR 8/2405-S08/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2327/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-E-2340/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/2328-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/2405-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2309/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2160-S08/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2319-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2328-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2331-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 8/2420-S08/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2150-S08/89-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-S-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 8/2405-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/STAIR 8-4/S08-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/STAIR 8-4/S08-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2160-S08/4-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2207-S08/4-121	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2312-S08/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2419-S08/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S08 - Stairwell No. 8	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S08 - Stairwell No. 8	

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-STAIR 8/2420-S08/92-155: 2-155-131-03	0:00, S. of 2420	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-STAIR 8/2405-S08/4-155 2407	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2602/STAIR 8-4/S08-131 2332	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 8/2160-S08/4-100 2154	0:00,	-	Yes		Yes	-
U2-FNP-W-STAIR 8/2207-S08/4-121 2205	0:00,	-	Yes		Yes	-
U2-FNP-W-STAIR 8/2312-S08/4-139 2305	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-S08-AUX BUILDING-STAIR 08-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** 2-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 2-S08 - Stairwell No. 8  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-S08	Stairwell No. 8	—	—	E, B	FireBarrier, U2-FNP-Ceiling-2208/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2220/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2327/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2340/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/2328-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2309/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2319-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2328-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2331-S08/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 8/2420-S08/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2150-S08/89-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 8/2405-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/STAIR 8-4/S08-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2602/STAIR 8-4/S08-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2160-S08/4-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2207-S08/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2312-S08/4-139:

Fire Safety Analysis

Fire Area ID:	2-S08 - Stairwell No. 8	Required Systems and Features
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 8/2419-S08/4-155: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-S08-AUX BUILDING-STAIR 08-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-S10 - Stairwell No. 10  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-S10	Stairwell No. 10	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-S10 - Stairwell No. 10	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-S10 - Stairwell No. 10	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 10/2422-S10/4-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2606-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 10/2610-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2322-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2608-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2329-S10/4-139	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2422-S10/4-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2604-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2421-S10/92-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2605-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	Yes
U2-FNP-W-STAIR 10/2609-S10/4-131	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 10/2608-S10/4-131 2334	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 10/2422-S10/4-155 2431	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 10/2604-S10/4-131 2333	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-STAIR 10/2609-S10/4-131 2335	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	2-S10 - Stairwell No. 10	Systems and Features
Fire Zone ID:	2-S10 - Stairwell No. 10	

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-S10-AUX BUILDING-STAIR 10-Restricted transient controls	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** 2-S10 - Stairwell No. 10  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-S10 - Stairwell No. 10  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-S10 - Stairwell No. 10  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment M Code Compliance Evaluation for NFPA 80, 2007 Edition, Fire Doors and Other Opening Protectives
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 80, 2007 Edition. The approach was to determine the applicable code edition for the applicable fire doors, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Fire doors were determined to be compliant with the relevant sections of NFPA 80, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

**Fire Area ID:** 2-S10 - Stairwell No. 10  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Previously Approved Engineering Evaluations**

### Licensing Action

Appendix R Exemption (No. 1-41), Unit 1 and 2 Auxiliary Building, Diesel Generator Building and the Service Water Intake Structure, 3 hour rated fire barrier separating fire areas (III.G.2.a criteria)

### Licensing Basis

Exemption request per 10/18/1985 and 01/27/1986 APC letters to the NRC provide the following justification for the lack of 3 hour rated fire barrier separating fire areas, which was approved by the NRC in a letter dated 12/29/1986:

- The majority of the subject fire doors exceed NFPA 80 gap specifications by less than 3/4 of an inch.
- Most of the excessive clearances result from an unintentional unevenness of or slope in the concrete floors.
- Smoke or heat detection systems are installed on both sides of the affected doors except as noted.
- The in-situ combustible loading in the vicinity of the bottom of the doors is minimal.
- Access to fire doors is routinely kept clear.
- Since the gaps are at the bottom of the doors, passage of smoke and heat is minimized.
- The results of a liquid spill near a door with excessive clearance would not differ significantly from one near a door with prescribed clearance since a flow path exists under both doors.

This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).

## Fire Safety Analysis

**Fire Area ID:** 2-S10 - Stairwell No. 10  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-S10	Stairwell No. 10	—	—	E, B	FireBarrier, U2-FNP-Ceiling-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2606-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 10/2610-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2322-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 10/2608-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2329-S10/4-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2422-S10/4-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 10/2604-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2421-S10/92-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2605-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-STAIR 10/2609-S10/4-131: -- Barrier: Required to support a fire area boundary evaluation. Restricted transient controls, U2-S10-AUX BUILDING-STAIR 10-Restricted transient controls: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-SVB1-A	Service Water Valve Box, 2-SVB1, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB1-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/NA-2-SVB1-A/2-SVB1-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB1-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-SVB1-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	



## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-6), Service Water Valve Box No. 1 {Fire Area 2SVB1 (New: 2-SVB1-A and 2-SVB1-B)}, lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Subject valves are separated by a three-hour fire-rated concrete wall.</li><li>• All cables in fire area 2SVB1 are installed in conduit and the combustible loading is minimal.</li><li>• A fire would be contained in the individual compartment and could only communicate with the outside via a manhole cover in its roof.</li><li>• The effects of fire upon the redundant cable of the subject valve could cause them to become electrically inoperative, but they would not reposition from their required safe shutdown position. This insures that at a minimum one train of service water is available for safe shutdown.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-A - Service Water Valve Box, 2-SVB1, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-SVB1-A	Service Water Valve Box, 2-SVB1, Train A	—	—	R, B	FireBarrier, U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB1-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/NA-2-SVB1-A/2-SVB1-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB1-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-SVB1-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-SVB1-B	Service Water Valve Box, 2-SVB1, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/NA-2-SVB1-A/2-SVB1-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/NA-2-SVB4-A/2-SVB1-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-SVB1-B-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	



## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-6), Service Water Valve Box No. 1 {Fire Area 2SVB1 (New: 2-SVB1-A and 2-SVB1-B)}, lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Subject valves are separated by a three-hour fire-rated concrete wall.</li><li>• All cables in fire area 2SVB1 are installed in conduit and the combustible loading is minimal.</li><li>• A fire would be contained in the individual compartment and could only communicate with the outside via a manhole cover in its roof.</li><li>• The effects of fire upon the redundant cable of the subject valve could cause them to become electrically inoperative, but they would not reposition from their required safe shutdown position. This insures that at a minimum one train of service water is available for safe shutdown.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB1-B - Service Water Valve Box, 2-SVB1, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-SVB1-B	Service Water Valve Box, 2-SVB1, Train B	—	—	R, B	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/NA-2-SVB1-A/2-SVB1-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/NA-2-SVB4-A/2-SVB1-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-SVB1-B-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-SVB2-A	Service Water Valve Box, 2-SVB2, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/NA-2-SVB2-A/2-SVB2-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-DU-ABVB-B/2-SVB2-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
Restricted transient controls	-	-		Yes	-
U2-SVB2-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
U2-SVB2-A-NA-SVB2-A-Restricted transient controls	-	-		-	-

## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	



## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Performance-based approach Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-7), Service Water Valve Box No. 2 {Fire Area 2SVB2 (New: 2-SVB2-A and 2-SVB2-B)}, lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Subject valves are separated by a three-hour fire-rated concrete wall.</li><li>• All cables in fire area 2SVB2 are installed in conduit and the combustible loading is minimal.</li><li>• A fire would be contained in the individual compartment and could only communicate with the outside via a manhole cover in its roof.</li><li>• Redundant service water valves could become electrically inoperative. A long term (&gt;24 hour) manual action can be performed to reposition the Train A or B service water valves. This insures that at a minimum one train of service water is available for safe shutdown.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-A - Service Water Valve Box, 2-SVB2, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-SVB2-A	Service Water Valve Box, 2-SVB2, Train A	—	—	R, B	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/NA-2-SVB2-A/2-SVB2-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-DU-ABVB-A/2-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-DU-ABVB-B/2-SVB2-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-SVB2-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-SVB2-B	Service Water Valve Box, 2-SVB2, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/NA-2-SVB2-A/2-SVB2-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-SVB2-B-NA-AREA WIDE-Procedures/Recovery Actions	-	-		Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	



## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Licensing Action</b>	Appendix R Exemption (No. 2-7), Service Water Valve Box No. 2 {Fire Area 2SVB2 (New: 2-SVB2-A and 2-SVB2-B)}, lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provides the following justification for the lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Subject valves are separated by a three-hour fire-rated concrete wall.</li><li>• All cables in fire area 2SVB2 are installed in conduit and the combustible loading is minimal.</li><li>• A fire would be contained in the individual compartment and could only communicate with the outside via a manhole cover in its roof.</li><li>• Redundant service water valves could become electrically inoperative. A long term (&gt;24 hour) manual action can be performed to reposition the Train A or B service water valves. This insures that at a minimum one train of service water is available for safe shutdown.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

**Fire Area ID:** 2-SVB2-B - Service Water Valve Box, 2-SVB2, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-SVB2-B	Service Water Valve Box, 2-SVB2, Train B	—	—	—	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/NA-2-SVB2-A/2-SVB2-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-SVB3-A	Service Water Valve Box, 2-SVB3, Train A	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB3-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB3-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-2-SVB3-A/2-SVB3-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-SVB3-A-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train B charging pump or swing charging pump via Train B power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train B charging pump or swing charging pump via Train B power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train B charging pump or swing charging pump via Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	



## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train B service water is provided with two service water pumps in service recirculating to the pond or Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Nuclear Safety Performance Goals

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train B component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-A - Service Water Valve Box, 2-SVB3, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-SVB3-A	Service Water Valve Box, 2-SVB3, Train A	—	—	R, B	FireBarrier, U2-FNP-E-NA/NA-DU-ABVB-B/2-SVB3-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB3-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-2-SVB3-A/2-SVB3-B-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-SVB3-A-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-SVB3-B	Service Water Valve Box, 2-SVB3, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/NA-2-SVB3-A/2-SVB3-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-SVB3-B-NA-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	<ul style="list-style-type: none"> <li>Unit 2: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.</li> <li>Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.</li> </ul>	
3.1 RCS Inventory Control - RCS Makeup	<ul style="list-style-type: none"> <li>Unit 2: RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.</li> <li>Unit 1: RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.</li> </ul>	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	<ul style="list-style-type: none"> <li>Unit 2: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> <li>Unit 1: Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.</li> </ul>	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	<ul style="list-style-type: none"> <li>Unit 2: Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> <li>Unit 1: Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.3 Vital Auxiliaries Component Cooling Water	<ul style="list-style-type: none"><li>• Unit 2: Train A component cooling water is provided with non-essential loads isolated.</li><li>• Unit 1: Train A/Train B component cooling water is provided with non-essential loads isolated.</li></ul>	
7.4 Vital Auxiliaries HVAC	<ul style="list-style-type: none"><li>• Unit 2: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.</li><li>• Unit 1: Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.</li></ul>	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB3-B - Service Water Valve Box, 2-SVB3, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
2-SVB3-B	Service Water Valve Box, 2-SVB3, Train B	—	—	R, B	FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/NA-2-SVB3-A/2-SVB3-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-SVB3-B-NA-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-A - Service Water Valve Box, 2-SVB4, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
2-SVB4-A	Service Water Valve Box, 2-SVB4, Train A	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-A - Service Water Valve Box, 2-SVB4, Train A  
**Fire Zone ID:** 2-SVB4-A - Service Water Valve Box, 2-SVB4, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/NA-DU-ABVB-B/2-SVB4-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/NA-2-SVB4-A/2-SVB1-B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB4-A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-A - Service Water Valve Box, 2-SVB4, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-A - Service Water Valve Box, 2-SVB4, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB4-A - Service Water Valve Box, 2-SVB4, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-SVB4-A	Service Water Valve Box, 2-SVB4, Train A	—	—	—	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/NA-DU-ABVB-B/2-SVB4-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/NA-2-SVB4-A/2-SVB1-B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/NA-DU-ABVB-A/2-SVB4-A-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.



Fire Safety Analysis

Fire Area ID:	2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B	Fire Area Definition
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Elevation(s)
2-SVB4-B	Service Water Valve Box, 2-SVB4, Train B	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B  
**Fire Zone ID:** 2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** 2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-SVB4-B - Service Water Valve Box, 2-SVB4, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-SVB4-B	Service Water Valve Box, 2-SVB4, Train B	—	—	—	FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Fire Area Definition

Fire Zone ID	Description	Elevation(s)
2-084	Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs	
2-085	Turbine Building, General Area	
2-085I	I - El. 189'-0", Entire Floor (less Zone H) and Platform at El. 207'-0"	
2-087	Steam Generator Feed Pumps A & B	
2-088	Turbine Building Switchgear Area	
2-STAIRWELL-E	EAST STAIRWELL IN UNIT 2 TURBINE	
2-STAIRWELL-N	NORTH STAIRWELL IN UNIT 2 TURBINE	

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-084 - Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs	

### Extinguishers

—

### Hose Stations

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### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2T-12A-1	U2-84 Detection System 2T-12A(D)-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
2T-12B-1	U2-84 Detection System 2T-12B(D)-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
2T-3-1	U2-84 Detection System 2T-3(D)-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
2T-8-1	U2-84 Detection System 2T-8(D)-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-
2T-9-1	U2-84 Detection System 2T-9(D)-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- D: Required to meet DID criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2T-12A-1	Preaction Sprinkler System, U2-2084, Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs., Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-12B-1	Preaction Sprinkler System, U2-2084, Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs., Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-3-1	Preaction Sprinkler, U2-2084, Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs., Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-8-1	Preaction Sprinkler System, U2-2084, Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs., Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-9-1	Preaction Sprinkler System, U2-2084, Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs., Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-084 - Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Fire Zone ID:** 2-085 - Turbine Building, General Area

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T20	Turb.Bldg-137'-North of Charcoal Filter Unit	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T21	Turb.Bldg-137'-North of Water Analysis Room	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T22	Turb.Bldg-137'-Southwest Condenser B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T23	Turb.Bldg-137'-Northwest Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T24	Turb.Bldg-137'-Northwest Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T25	Turb.Bldg-137'-North Wall	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T26	Turb.Bldg-137'-Northeast Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T27	Turb.Bldg-137'-Northeast Condenser A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T28	Turb.Bldg-137'-Southeast Condenser B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T29	Turb.Bldg-137'-Near Southeast Stairwell	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T30	Turb.Bldg-155'-Near 4160 SWGR 2E	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T31	Turb.Bldg-155'-Near Air Ejector	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T32	Turb.Bldg-155'-Near L.P. Heater 1B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T33	Turb.Bldg-155'-Near L.P. Heater 1A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T34	Turb.Bldg-155'-Near North Stairwell	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T35	Turb.Bldg-155'-Near S.G.F.P 2A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T36	Turb.Bldg-173'-Near L.P. Heater 5B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T37	Turb.Bldg-173'-Near L.P. Heater 5A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T38	Turb.Bldg-173'-North Wall by Stairwell	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T46	Turb.Bldg-155'-Near 600 SWGF 2Q	-	-		Yes	-

#### Hose Stations

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2U43D001	Hose Station - N2U43D001-FZ 85D Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D002	Hose Station - N2U43D002-FZ 85D Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D003	Hose Station - N2U43D003-FZ 85D Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D004	Hose Station - N2U43D004-FZ 85C Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D005	Hose Station - N2U43D005-FZ 85C Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D006	Hose Station - N2U43D006-FZ 85A Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D007	Hose Station - N2U43D007-FZ 85G Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D008	Hose Station - N2U43D008-FZ 85G Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D009	Hose Station - N2U43D009-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D010	Hose Station - N2U43D010-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D011	Hose Station - N2U43D011-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D012	Hose Station - N2U43D012-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D013	Hose Station - N2U43D013-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-085 - Turbine Building, General Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N2U43D014	Hose Station - N2U43D014-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D015	Hose Station - N2U43D015-FZ 85B Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D016	Hose Station - N2U43D016-FZ 85I Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D017	Hose Station - N2U43D017-FZ 85I Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D018	Hose Station - N2U43D018-FZ 85I Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D019	Hose Station - N2U43D019-FZ 85I Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D020	Hose Station - N2U43D020-FZ 85I Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-
N2U43D021	Hose Station - N2U43D021-FZ 85I Room U2 TURB	Yes	-	-- Ch3: 3.6 Standpipe and Hose Stations.	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2T-16A-1	U2-85 Detection System 2T-16A-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2T-16B-1	U2-85 Detection System 2T-16B-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2T-16C-1	U2-85 Detection System 2T-16C-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2T-16D-1	U2-85 Detection System 2T-16D-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-
2T-20-1	U2-85 Detection System 2T-20-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2T-10-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elevations 173' and 189' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-121-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building, SO Shack, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-16A-1	Manual Fixed Water Spray System, U2-2085, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-16B-1	Manual Fixed Water Spray System, U2-2085, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-16C-1	Manual Fixed Water Spray System, U2-2085, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-085 - Turbine Building, General Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2T-16D-1	Manual Fixed Water Spray System, U2-2085, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-16E-1	Manual Fixed Water Spray System, U2-2085, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-2-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elevation 155' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-20-1	Preaction Sprinkler System, U2-2085, Turbine Building, General Area, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-5A-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elevation 155' South of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-5B-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elevation 155' North of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-7A-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elvations 173' and 189' West Side of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-7B-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elvations 173' and 189' Northwest of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-
WS-2T-7C-1	Wet Pipe Sprinkler System, U2-2085, Turbine Building Elvations 173' and 189' Northwest of Condensers, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-81/85A-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85B/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Fire Zone ID:** 2-085 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-85C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85D/Stairwell-E-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85G/Stairwell-E-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-207	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-265	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-284	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-173	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85E/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85E/85C-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-81/85C-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Fire Zone ID:** 2-085 - Turbine Building, General Area

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88E/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/80K-85B/228-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84A/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84C/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84D/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-84E/85D-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-85D/85A-137	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

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### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137 T011	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155 T111	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155 T112	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T006	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T008	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137 T012	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137 T007	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137 T010	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155 T113	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-085 - Turbine Building, General Area	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-81/85A-137 T2002	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85D/Stairwell-E-137 T2004	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85G/Stairwell-E-155 T2104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-189 T2304	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-207 T2401	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-265 T2500	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-284 T2701	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284 T2700	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-155 T2102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-173 T2201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-189 T2302	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Fire Zone ID:** 2-085I - I - El. 189'-0", Entire Floor (less Zone H) and Platform at El. 207'-0"

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T39	Turb.Bldg-189'-Near L.P. Heater 3A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T40	Turb.Bldg-189'-Near L.P. Heater 3B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T41	Turb.Bldg-189'-Near M.S.P. 1A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T42	Turb.Bldg-207'-Near L.P. Heater 4A	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
T43	Turb.Bldg-207'-Near L.P. Heater 4B	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-087 - Steam Generator Feed Pumps A & B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
2T-17-1	U2-87 Detection System 2T-17-1 Room U2 Turb	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- N: Required to meet NPO criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-2T-17-1	Manual Fixed Water Spray, U2-2087, Turbine Building, Steam Generator Feed PumpsA & B, Room TB	-	Yes	-- D: Required to meet DID criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-87A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Fire Zone ID:** 2-088 - Turbine Building Switchgear Area

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
GS-2T-13-1	Local CO2 System system in Fire Area 88D , room number U2 TURB, 600V Swgr Bus 2Q	-	Yes	-- R: Required to meet risk criteria.	Yes	-
GS-2T-13-2	Local CO2 System system in Fire Area 88A , room number U2 TURB, 600V Swgr Bus 2P	-	Yes	-- R: Required to meet risk criteria.	Yes	-
GS-2T-13-3	Local CO2 System system in Fire Area 88F , room number U2 TURB, 600V Swgr Bus 2G	-	Yes	-- R: Required to meet risk criteria.	Yes	-
GS-2T-14-1	Local CO2 System system in Fire Area 88E , room number U2 TURB, P.T. Cabinets	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
GS-2T-14-2	Local CO2 System system in Fire Area 88B , room number U2 TURB, 4160V Swgr 2D	-	Yes	-- R: Required to meet Risk criteria.	Yes	-
GS-2T-14-3	Local CO2 System system in Fire Area 88C , room number U2 TURB, 4160V Swgr Bus 2E	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88E/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88A/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88B/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88C/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88D/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/U2 TURB-88E/85B-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	2-TB - Turbine Building General Area	Systems and Features				
Fire Zone ID:	2-088 - Turbine Building Switchgear Area					

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-U2 TURB/U2 TURB-88F/85G-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Dampers

Fire Doors

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Fire Zone ID:** 2-STAIRWELL-E - EAST STAIRWELL IN UNIIT 2 TURBINE

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-85D/Stairwell-E-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85G/Stairwell-E-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-207	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-265	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-284	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-U2 TURB/U2 TURB-85D/Stairwell-E-137 T2004	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85G/Stairwell-E-155 T2104	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-189 T2304	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-207 T2401	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-265 T2500	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-284 T2701	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID: 2-TB - Turbine Building General Area  
Fire Zone ID: 2-STAIRWELL-E - EAST STAIRWELL IN UNIIT 2 TURBINE

Systems and Features

Electrical Raceway Fire Barrier Systems

Other Passive Features

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	2-STAIRWELL-N - NORTH STAIRWELL IN UNIT 2 TURBINE	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-U2 TURB/U2 TURB-81/Stairwell-N-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-173	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-U2 TURB/U2 TURB-81/Stairwell-N-137 T2003	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-155 T2102	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-173 T2201	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-189 T2302	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by performance-based approach tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are performance-based approach shut off. Undesired pressure increase is prevented by performance-based approach deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Performance-based approach decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved utilizing equipment and cables that have been reviewed to be unaffected by the effects of fire suppression activities in the area and adjacent areas. Drainage capacity in the general Turbine Building area exceeds expected fire suppression flows. Local hazards protected by sprinkler or water spray systems have sufficient curbing and discharge of manual suppression water in adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment A Code Compliance Evaluation for NFPA 10, 2007 Edition, Standard for Portable Fire Extinguishers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 10, 2007 Edition. The approach was to determine the applicable code edition for the applicable portable fire extinguishers, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Portable fire extinguishers were determined to be compliant with the relevant sections of NFPA 10, 2007 Edition, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment F Code Compliance Evaluation for NFPA 14, 2007 Edition, Standard for Installation of Standpipes and Hose Systems
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 14, 2007 Edition. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Standpipe and hose systems were determined to be compliant with the relevant sections of NFPA 14, 2007 Edition, with the exception of the non-compliances identified in the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2007 edition non-compliances against the Farley code of record edition of 1976.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	Yes
<b>Adequate for the Hazard</b>	No
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable &amp; combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>

<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers
<b>Inactive</b>	No
<b>Functionally Equivalent</b>	No
<b>Adequate for the Hazard</b>	Yes
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Modifications: -- Risk: Modification to provide fuse or other electrical isolation device at the DC shunt connection point.
2-084	Turbine, SGFP, and H2 Seal Oil Conditioners & Reservoirs	D	E, R, D	—	Detection System, 2T-12A-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2T-12B-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2T-3-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2T-8-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. Detection System, 2T-9-1: -- DID: Required to meet DID criteria. -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84B/85B-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2T-12A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-12B-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-3-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-8-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-9-1: -- DID: Required to meet DID criteria.  Detection System, 2T-16A-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2T-16B-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2T-16C-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2T-16D-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. Detection System, 2T-20-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria.
2-085	Turbine Building, General Area	D	E, R, N	—	

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- NPO: Required to meet NPO criteria. FireBarrier, U0-FNP-E-U1 TURB/U2 TURB-U1-85F/U2-85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85B/U2-85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85D/U2-85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85E/U2-85E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85F/U2-85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-U1 TURB/U2 TURB-U1-85G/U2-85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-81/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85B/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85D/Stairwell-E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85G/Stairwell-E-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-207: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-265: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-284: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85E/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85E/85C-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88D/85G-155:

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
 Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-81/85C-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88E/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/80K-85B/228-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84A/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84C/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84D/85D-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-84E/85D-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-85D/85A-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2T-10-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-121-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-16A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-16B-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-16C-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-16D-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-16E-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-20-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-2-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-5A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-5B-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-7A-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-7B-1: -- DID: Required to meet DID criteria. Water Suppression, WS-2T-7C-1: -- DID: Required to meet DID criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-085I	I - El. 189'-0", Entire Floor (less Zone H) and Platform at El. 207'-0"	—	—	—	—
2-087	Steam Generator Feed Pumps A & B	D	E, R, N	—	Detection System, 2T-17-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- NPO: Required to meet NPO criteria. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-87A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Water Suppression, WS-2T-17-1: -- DID: Required to meet DID criteria.
2-088	Turbine Building Switchgear Area	R	—	—	FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88C/85G-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	2-TB - Turbine Building General Area	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88E/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88A/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88B/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88C/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88D/85G-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88E/85B-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/U2 TURB-88F/85G-155: -- Barrier: Required to support a fire area boundary evaluation. Gaseous Suppression, GS-2T-13-1: -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-2T-13-2: -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-2T-13-3: -- Risk: Required to meet risk criteria. Gaseous Suppression, GS-2T-14-1: -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2T-14-2: -- Risk: Required to meet Risk criteria. Gaseous Suppression, GS-2T-14-3: -- Risk: Required to meet Risk criteria.  FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85D/Stairwell-E-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85G/Stairwell-E-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85I/Stairwell-E-207: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-265: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/U2 TURB-85J/Stairwell-E-284: -- Barrier: Required to support a fire area boundary evaluation.
2-STAIRWELL-E	EAST STAIRWELL IN UNIT 2 TURBINE	—	—	—	

## Fire Safety Analysis

**Fire Area ID:** 2-TB - Turbine Building General Area  
**Compliance Basis:** Unit 2: NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions  
Unit 1: NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
2-STAIRWELL-N	NORTH STAIRWELL IN UNIT 2 TURBINE	—	—	—	FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-81/Stairwell-N-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-173: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/U2 TURB-85B/Stairwell-N-189: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
ABRF1-U1	Control Room Air Conditioner/Unit 1 Side	
ABRF2-U1	Control Room Air Conditioner/Unit 2 Side	

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2 ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side				Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS	
U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-01-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-02-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: 1-175-125-03-1	0:00, F. of Roof (Outside)	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-07-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-09-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-01-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-03-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-05-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-12-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-17-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-19-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-20-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-24-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-26-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-01-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-05-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-02-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-04-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-03-1	0:00, C. of 472	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-06-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-10-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-14-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-15-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1 2510-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1 510-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

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## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF1-U1 - Control Room Air Conditioner/Unit 1 Side

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2 ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side				Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS	
U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2 ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side				Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS	
U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: 1-175-125-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-01-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-02-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-03-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-04-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-05-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-06-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-07-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-08-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-09-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-10-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-11-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-12-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-17-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-19-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-20-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-24-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-26-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-01-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-05-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-02-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-04-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-03-1	0:00, C. of 472	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-15-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2 2510-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2 510-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF2-U1 - Control Room Air Conditioner/Unit 2 Side

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
ABRF1-U1	Control Room Air Conditioner/Unit 1 Side	—	—	—	FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155:



## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155:

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
ABRF2-U1	Control Room Air Conditioner/Unit 2 Side	—	—	—	<p>FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155:  -- Barrier: Required to support a fire area boundary evaluation.</p> <p>FireBarrier, U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155:



## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** ABRF-U1 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
ABRF1-U2	Control Room Air Conditioner/Unit 1 Side	
ABRF2-U2	Control Room Air Conditioner/Unit 2 Side	

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2 ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side				Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS	
U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-01-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: 1-130-137-02-1	0:00, F. of 408	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: 1-175-125-03-1	0:00, F. of Roof (Outside)	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-07-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-09-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: 2-155-574-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-01-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-03-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-05-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-12-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-17-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-19-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-20-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-24-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-26-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-01-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-05-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-02-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-04-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-03-1	0:00, C. of 472	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-06-1	0:00, F. of 2501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-10-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-14-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: 1-175-110-15-1	0:00, F. of 501	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1 2510-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1 510-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF1-U2 - Control Room Air Conditioner/Unit 1 Side

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: Fire Zone ID:		ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2 ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side				Systems and Features	
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS	
U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	
U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-	

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: 1-130-137-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: 1-175-125-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-01-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-02-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-03-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-04-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-05-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-06-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-07-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-08-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-09-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-10-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: 2-155-574-11-1	0:00, F. of 2452	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-12-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-17-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-19-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-20-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-24-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-26-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-01-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-05-1	0:00, C. of 412	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-01-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-05-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-02-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-04-1	0:00, C. of 413	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-02-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: 1-155-121-03-1	0:00, C. of 472	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: 1-155-121-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-06-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-10-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: 1-175-110-15-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2 2510-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2 510-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Fire Zone ID:** ABRF2-U2 - Control Room Air Conditioner/Unit 2 Side

**Systems and Features**

### Other Passive Features

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by performance-based approach Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
ABRF1-U2	Control Room Air Conditioner/Unit 1 Side	—	—	—	FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155:

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155:



## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
ABRF2-U2	Control Room Air Conditioner/Unit 2 Side	—	—	—	FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-406/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-407/U2-ABRF-U1-4/U2-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-236/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-238/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-240/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-348/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-402/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-403/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-404/U1-ABRF-97/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-405/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-406/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-407/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-408/U1-ABRF-4/U1-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-409/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410A/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-410B/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-415/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-418/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-419/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-420/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-421/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-423/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-424/U1-ABRF-4/U1-ABRF-155:

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-425/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-426/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-427/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-429/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-432/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-438/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-441/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-445/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-446/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-447/U1-ABRF-98/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-448/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-449/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-450/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-451/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-453/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-454/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-455/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-456/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-459/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-461/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-462/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-463/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-464/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-467/U1-ABRF-4/U1-ABRF-165: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-Ceiling-478/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-480/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-481/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-482/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-483/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-484/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-485/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-486/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-487/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-488/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-489/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-490/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-491/U1-ABRF-4/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-500/U1-ABRF-13/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-501/U1-ABRF-51/U1-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-502/U1-ABRF-53/U1-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-503/U1-ABRF-54/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-504/U1-ABRF-4/U1-ABRF-194: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-505/U1-ABRF-4/U1-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-506/U1-ABRF-4/U1-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 10/U1-ABRF-S01/U1-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-CEILING-STAIR 2/U1-ABRF-S02/U1-ABRF-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-STAIR 8/U1-ABRF-S08/U1-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2236/U2-ABRF-6/U2-ABRF-155:

## Fire Safety Analysis

<b>Fire Area ID:</b>	ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2402/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2403/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2404/U2-ABRF-97/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2405/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2406/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2408/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2409/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2410A/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2418/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2419/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2420/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2421/U2-ABRF-92/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2422/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2423/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2424/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2425/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2426/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2427/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2429/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2447/U2-ABRF-98/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2452/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2453/U2-ABRF-44/U2-ABRF-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2454/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2455/U2-ABRF-44/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** ABRF-U2 - Control Room Air Conditioner, Unit 1 & Unit 2  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-Ceiling-2462/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2463/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2464/U2-ABRF-43/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2478/U2-ABRF-4/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2500/U2-ABRF-13/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-2501/U2-ABRF-51/U2-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2502/U2-ABRF-43/U2-ABRF-195: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2503/U2-ABRF-54/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2504/U2-ABRF-4/U2-ABRF-191: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2505/U2-ABRF-4/U2-ABRF-200: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2506/U2-ABRF-43/U2-ABRF-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-412/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-413/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-472/U2-ABRF-44/U2-ABRF-175-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-CEILING-501/U2-ABRF-51/U2-ABRF-195-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 1/U2-ABRF-S01/U2-ABRF-185: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 2/U2-ABRF-S02/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-STAIR 8/U2-ABRF-S08/U2-ABRF-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2-ABRF/CTMT-U2-ABRF/55-175: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-A - Diesel Fuel Oil Storage Tank Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DU-DGFOST-A	Diesel Fuel Storage Tank Ductbank, Train A	



## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-A - Diesel Fuel Oil Storage Tank Ductbank, Train A  
**Fire Zone ID:** DU-DGFOST-A - Diesel Fuel Storage Tank Ductbank, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-All-NA/OUTSIDE-DU-DGFOST-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGFOST-A/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-A - Diesel Fuel Oil Storage Tank Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-A - Diesel Fuel Oil Storage Tank Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-A - Diesel Fuel Oil Storage Tank Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-A - Diesel Fuel Oil Storage Tank Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DU-DGFOST-A	Diesel Fuel Storage Tank Ductbank, Train A	—	—	—	FireBarrier, U1-FNP-AII-NA/OUTSIDE-DU-DGFOST-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGFOST-A/56A-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-B - Diesel Fuel Oil Storage Tank Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
DU-DGFOST-B	Diesel Fuel Storage Tank Ductbank, Train B	

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-B - Diesel Fuel Oil Storage Tank Ductbank, Train B  
**Fire Zone ID:** DU-DGFOST-B - Diesel Fuel Storage Tank Ductbank, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-All-NA/OUTSIDE-DU-DGFOST-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/DGB-DU-DGFOST-B/56A-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-B - Diesel Fuel Oil Storage Tank Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	



## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-B - Diesel Fuel Oil Storage Tank Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-B - Diesel Fuel Oil Storage Tank Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** DU-DGFOST-B - Diesel Fuel Oil Storage Tank Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DU-DGFOST-B	Diesel Fuel Storage Tank Ductbank, Train B	—	—	—	FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGFOST-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/DGB-DU-DGFOST-B/56A-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
DU-SWISVB-A-U1	SWIS to Valve Box Ductbank, Train A	

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A  
**Fire Zone ID:** DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-A-U1 - SWIS to Valve Box Ductbank, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DU-SWISVB-A-U1	SWIS to Valve Box Ductbank, Train A	—	—	—	FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
DU-SWISVB-A-U2	SWIS to Valve Box Ductbank, Train A	

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A  
**Fire Zone ID:** DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4. 16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-A-U2 - SWIS to Valve Box Ductbank, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DU-SWISVB-A-U2	SWIS to Valve Box Ductbank, Train A	—	—	—	FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-A/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
DU-SWISVB-B-U1	SWIS to Valve Box Ductbank, Train B	



## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B  
**Fire Zone ID:** DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-B-U1 - SWIS to Valve Box Ductbank, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DU-SWISVB-B-U1	SWIS to Valve Box Ductbank, Train B	—	—	—	FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
DU-SWISVB-B-U2	SWIS to Valve Box Ductbank, Train B	

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B  
**Fire Zone ID:** DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1.Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	DU-SWISVB-B-U2 - SWIS to Valve Box Ductbank, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
DU-SWISVB-B-U2	SWIS to Valve Box Ductbank, Train B	—	—	—	FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-NA/S.W. INTK-DU-SWISVB-B/72-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U1 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
EMBED-DGB-U1	Embedded Conduit, Diesel Generator Building	

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U1 - Diesel Generator Building Embedded Conduit  
**Fire Zone ID:** EMBED-DGB-U1 - Embedded Conduit, Diesel Generator Building

**Systems and Features**

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U1 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U1 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained in this area due to embedded conduits. Cables in embedded conduits are protected from adverse conditions occurring due to fire suppression effects. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U1 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



Fire Safety Analysis

Fire Area ID:	EMBED-DGB-U1 - Diesel Generator Building Embedded Conduit	Required Systems and Features
Compliance Basis:	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
EMBED-DGB-U1	Embedded Conduit, Diesel Generator Building	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U2 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
EMBED-DGB-U2	Embedded Conduit, Diesel Generator Building	

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U2 - Diesel Generator Building Embedded Conduit  
**Fire Zone ID:** EMBED-DGB-U2 - Embedded Conduit, Diesel Generator Building

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

—

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U2 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U2 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries Electrical	1.Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B.2.4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment.3.125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained in this area due to embedded conduits. Cables in embedded conduits are protected from adverse conditions occurring due to fire suppression effects. Therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U2 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

**Fire Area ID:** EMBED-DGB-U2 - Diesel Generator Building Embedded Conduit  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
EMBED-DGB-U2	Embedded Conduit, Diesel Generator Building	—	—	—	—

## Fire Safety Analysis

Fire Area ID: FPHB -  
Compliance Basis:

Fire Area Definition

Fire Zone ID	Description	Elevation(s)
FPH1	FIRE PUMP HOUSE N1P43P001 ROOM	
FPH2	FIRE PUMP HOUSE N1P43P002 ROOM	
FPH3	FIRE PUMP HOUSE N1P43P003 ROOM	
FPH4	FIRE PUMP HOUSE NORTH ROOM	



## Fire Safety Analysis

<b>Fire Area ID:</b>	FPHB -	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	FPH1 - FIRE PUMP HOUSE N1P43P001 ROOM	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
FP1	Fire Pump House	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-FPH1/FPH4-FPHB/FPHB-155	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-FPH3/FPH1-FPHB/FPHB-155	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-FPH3/FPH1-FPHB/FPHB-155 D-6	0:00,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	FPHB -	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	FPH2 - FIRE PUMP HOUSE N1P43P002 ROOM	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
FP2	Fire Pump House	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-FPH/FPH3-FPHB/FPHB-155	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-1	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-FPH/FPH3-FPHB/FPHB-155 D-7	0:00,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

Fire Safety Analysis

Fire Area ID:	FPHB -	Systems and Features
Fire Zone ID:	FPH2 - FIRE PUMP HOUSE N1P43P002 ROOM	

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	FPHB -	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	FPH3 - FIRE PUMP HOUSE N1P43P003 ROOM	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-1	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-FPH/FPH3-FPHB/FPHB-155	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-FPH3/FPH1-FPHB/FPHB-155	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-FPH/FPH3-FPHB/FPHB-155 D-7	0:00,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-FPH3/FPH1-FPHB/FPHB-155 D-6	0:00,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

Fire Area ID: FPHB -  
Fire Zone ID: FPH4 - FIRE PUMP HOUSE NORTH ROOM

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-FPH1/FPH4-FPHB/FPHB-155	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	FPHB -	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>		

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
FPH1	FIRE PUMP HOUSE N1P43P001 ROOM	—	—	—	FireBarrier, U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-FPH1/FPH4-FPHB/FPHB-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-FPH3/FPH1-FPHB/FPHB-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation.
FPH2	FIRE PUMP HOUSE N1P43P002 ROOM	—	—	—	FireBarrier, U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-FPH/FPH3-FPHB/FPHB-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation.
FPH3	FIRE PUMP HOUSE N1P43P003 ROOM	—	—	—	FireBarrier, U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-FPH/FPH3-FPHB/FPHB-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-FPH3/FPH1-FPHB/FPHB-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation.
FPH4	FIRE PUMP HOUSE NORTH ROOM	—	—	—	FireBarrier, U0-FNP-N-FPH1/FPH4-FPHB/FPHB-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
SWWPVB-A-U1	Service Water Valve Box Return to Wet Pit, Train A	

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A  
**Fire Zone ID:** SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

—

#### Fire Doors

—

#### Electrical Raceway Fire Barrier Systems

—

#### Other Passive Features

—



## Fire Safety Analysis

**Fire Area ID:** SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-13), Unit 1 and 2 Service Water Valve Box (Fire Area SWGA (New: SWWPVB-A and SWWPVB-B) , lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provide the following justification for the lack of 3 hour fire-rated barrier separating redundant trains, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Low in situ combustibles</li><li>• 3 ft thick reinforced concrete barrier, with 1 sealed penetration</li><li>• Effects of exposure fire could cause equipment to become electrically inoperative, but would not change from its required position, thus neither redundant trains of service water would be rendered inoperative.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U1 - Service Water Valve Box Return to Wet Pit, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWWPVB-A-U1	Service Water Valve Box Return to Wet Pit, Train A	—	—	—	FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
SWWPVB-A-U2	Service Water Valve Box Return to Wet Pit, Train A	

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A  
**Fire Zone ID:** SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A

### Systems and Features

#### Extinguishers

—

#### Hose Stations

—

#### Active Fire Protection - Detection

—

#### Active Fire Protection - Suppression

—

#### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

#### Fire Dampers

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#### Fire Doors

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#### Electrical Raceway Fire Barrier Systems

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#### Other Passive Features

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## Fire Safety Analysis

**Fire Area ID:** SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Licensing Action</b>	Appendix R Exemption (No. 1-13), Unit 1 and 2 Service Water Valve Box (Fire Area SWGA (New: SWWPVB-A and SWWPVB-B) , lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provide the following justification for the lack of 3 hour fire-rated barrier separating redundant trains, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Low in situ combustibles</li><li>• 3 ft thick reinforced concrete barrier, with 1 sealed penetration</li><li>• Effects of exposure fire could cause equipment to become electrically inoperative, but would not change from its required position, thus neither redundant trains of service water would be rendered inoperative.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-A-U2 - Service Water Valve Box Return to Wet Pit, Train A	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWWPVB-A-U2	Service Water Valve Box Return to Wet Pit, Train A	—	—	—	FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-A/SWWPVB-A-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
SWWPVB-B-U1	Service Water Valve Box Return to Wet Pit, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-13), Unit 1 and 2 Service Water Valve Box (Fire Area SWGA (New: SWWPVB-A and SWWPVB-B) , lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provide the following justification for the lack of 3 hour fire-rated barrier separating redundant trains, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Low in situ combustibles</li><li>• 3 ft thick reinforced concrete barrier, with 1 sealed penetration</li><li>• Effects of exposure fire could cause equipment to become electrically inoperative, but would not change from its required position, thus neither redundant trains of service water would be rendered inoperative.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U1 - Service Water Valve Box Return to Wet Pit, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWWPVB-B-U1	Service Water Valve Box Return to Wet Pit, Train B	—	—	—	FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Elevation(s)
SWWPVB-B-U2	Service Water Valve Box Return to Wet Pit, Train B	

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled and watertight barriers exist between divisions; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B	<b>Previously Approved Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Licensing Action</b>	Appendix R Exemption (No. 1-13), Unit 1 and 2 Service Water Valve Box (Fire Area SWGA (New: SWWPVB-A and SWWPVB-B) , lack of separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating (III.G.2.a criteria)	
<b>Licensing Basis</b>	<p>Exemption request per 03/13/1985 APC letter to the NRC provide the following justification for the lack of 3 hour fire-rated barrier separating redundant trains, which was approved by the NRC in a letter dated 11/19/1985:</p> <ul style="list-style-type: none"><li>• Low in situ combustibles</li><li>• 3 ft thick reinforced concrete barrier, with 1 sealed penetration</li><li>• Effects of exposure fire could cause equipment to become electrically inoperative, but would not change from its required position, thus neither redundant trains of service water would be rendered inoperative.</li></ul> <p>This exemption is no longer required because the subject boundaries have been demonstrated adequate for the hazard in existing engineering equivalency evaluation(s).</p>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	SWWPVB-B-U2 - Service Water Valve Box Return to Wet Pit, Train B	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
SWWPVB-B-U2	Service Water Valve Box Return to Wet Pit, Train B	—	—	—	FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-DU-SWISVB-B/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/NA-SWWPVB-A/SWWPVB-B-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** TBRF - Turbine Building Roof HVAC Room, Units 1 & 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Fire Area Definition**

Fire Zone ID	Description	Elevation(s)
TBRF1	Turbine Building Roof HVAC Room, Unit 1	
TBRF2	Turbine Building Roof HVAC Room, Unit 2	

## Fire Safety Analysis

<b>Fire Area ID:</b>	TBRF - Turbine Building Roof HVAC Room, Units 1 & 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	TBRF1 - Turbine Building Roof HVAC Room, Unit 1	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T44	Turb.Bldg-283'-North Bay	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-TBRF-TB-TB ROOF-Heat activated Smoke Vents	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	TBRF - Turbine Building Roof HVAC Room, Units 1 & 2	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	TBRF2 - Turbine Building Roof HVAC Room, Unit 2	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
T45	Turb.Bldg-283'-South Bay	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-TBRF-TB-TB ROOF-Heat Activated Smoke Vents	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** TBRF - Turbine Building Roof HVAC Room, Units 1 & 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	<ul style="list-style-type: none"> <li>Unit 2: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.</li> <li>Unit 1: Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** TBRF - Turbine Building Roof HVAC Room, Units 1 & 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
6 Process Monitoring	<ul style="list-style-type: none"> <li>Unit 2: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.</li> <li>Unit 1: 1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.</li> </ul>	
7.1 Vital Auxiliaries Electrical	<ul style="list-style-type: none"> <li>Unit 2: 1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> <li>Unit 1: 1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.</li> </ul>	
7.2 Vital Auxiliaries Service Water	Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

**Fire Area ID:** TBRF - Turbine Building Roof HVAC Room, Units 1 & 2  
**Compliance Basis:** NFPA 805, Section 4.2.3 Deterministic Approach

### Engineering Evaluations

**Engineering Evaluation ID** SM-C051326701-006 Identify Regulatory Fire Barriers

**Inactive** No

**Functionally Equivalent** No

**Adequate for the Hazard** Yes

**Summary** Purpose:

This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.

Bases for Acceptability:

- The fire areas, fire zones and rooms on both sides of the barrier were identified,
- The construction of the boundary and the potential issue with the element in question was described,
- The fire hazards and fire protection features impacting the barrier were described,
- Elements with construction features equal to 3-hr boundaries were credited as such,
- The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.



## Fire Safety Analysis

<b>Fire Area ID:</b>	TBRF - Turbine Building Roof HVAC Room, Units 1 & 2	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.3 Deterministic Approach	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
TBRF1	Turbine Building Roof HVAC Room, Unit 1	—	—	E	Heat activated Smoke Vents, U1-TBRF-TB-TB ROOF-Heat activated Smoke Vents: -- EEEE/LA: Required to support a fire area boundary evaluation.
TBRF2	Turbine Building Roof HVAC Room, Unit 2	—	—	E	Heat Activated Smoke Vents, U2-TBRF-TB-TB ROOF-Heat Activated Smoke Vents: -- EEEE/LA: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-SWIS-U1 - Yard Area in Vicinity of SWIS	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
CO2-RM-U1	CO2 Bottle Room (SWIS)	
SWIS-EXT-U1	SWIS Yard Area	

Fire Safety Analysis

Fire Area ID:	YARD-SWIS-U1 - Yard Area in Vicinity of SWIS	Systems and Features
Fire Zone ID:	CO2-RM-U1 - CO2 Bottle Room (SWIS)	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-YARD-U1-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

Fire Area ID:	YARD-SWIS-U1 - Yard Area in Vicinity of SWIS	Systems and Features
Fire Zone ID:	SWIS-EXT-U1 - SWIS Yard Area	

### Extinguishers

—

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-YARD-U1-SWIS-AREA WIDE-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-YARD-U1-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-SWIS-U1 - Yard Area in Vicinity of SWIS  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room OR Plant shutdown is performed from the Hot Shutdown Panel.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room OR Reactor is manually tripped from the Control Room prior to Control Room evacuation.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Unit 1: Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** YARD-SWIS-U1 - Yard Area in Vicinity of SWIS  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-SWIS-U1 - Yard Area in Vicinity of SWIS	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment J	Code Compliance Evaluation for NFPA 24, 2007 Edition, Private Fire Service Mains
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 24, 2007 Edition. The approach was to determine the applicable code edition for private fire service mains, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Private fire service mains were determined to be compliant with the relevant sections of NFPA-24-2007, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the FNP code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-SWIS-U1 - Yard Area in Vicinity of SWIS	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
CO2-RM-U1	CO2 Bottle Room (SWIS)	—	—	R	Procedures/Recovery Actions, U1-YARD-U1-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
SWIS-EXT-U1	SWIS Yard Area	—	—	E, R	Combustibles and flammable liquid control, U1-YARD-U1-SWIS-AREA WIDE-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U1-YARD-U1-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-SWIS-U2 - Yard Area in Vicinity of SWIS	<b>Fire Area Definition</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Fire Zone ID</b>	<b>Description</b>	<b>Elevation(s)</b>
CO2-RM-U2	CO2 Bottle Room (SWIS)	
SWIS-EXT-U2	SWIS Yard Area	

Fire Safety Analysis

Fire Area ID:	YARD-SWIS-U2 - Yard Area in Vicinity of SWIS	Systems and Features
Fire Zone ID:	CO2-RM-U2 - CO2 Bottle Room (SWIS)	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-YARD-U2-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

Fire Safety Analysis

Fire Area ID:	YARD-SWIS-U2 - Yard Area in Vicinity of SWIS	Systems and Features
Fire Zone ID:	SWIS-EXT-U2 - SWIS Yard Area	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-YARD-U2-SWIS-AREA WIDE-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-YARD-U2-SWIS-AREA WIDE-Procedures/Recovery Actions	-	Yes	-- R: Required to meet Risk criteria.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-SWIS-U2 - Yard Area in Vicinity of SWIS  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump or swing charging pump via Train A power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump or swing charging pump via Train A power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump or swing charging pump via Train A power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** YARD-SWIS-U2 - Yard Area in Vicinity of SWIS  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A service water is provided with two service water pumps in service recirculating to the pond or Train A service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with performance-based approach HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-SWIS-U2 - Yard Area in Vicinity of SWIS	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment J	Code Compliance Evaluation for NFPA 24, 2007 Edition, Private Fire Service Mains
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 24, 2007 Edition. The approach was to determine the applicable code edition for private fire service mains, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Private fire service mains were determined to be compliant with the relevant sections of NFPA-24-2007, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the FNP code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006	Identify Regulatory Fire Barriers
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li><li>• The construction of the boundary and the potential issue with the element in question was described,</li><li>• The fire hazards and fire protection features impacting the barrier were described,</li><li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li><li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-SWIS-U2 - Yard Area in Vicinity of SWIS	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
(All)	Area Wide	—	—	R	Procedures/Recovery Actions: -- Risk: Improvements to procedures necessary to incorporate recovery actions required to meet risk criteria.
CO2-RM-U2	CO2 Bottle Room (SWIS)	—	—	R	Procedures/Recovery Actions, U2-YARD-U2-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.
SWIS-EXT-U2	SWIS Yard Area	—	—	E, R	Combustibles and flammable liquid control, U2-YARD-U2-SWIS-AREA WIDE-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Procedures/Recovery Actions, U2-YARD-U2-SWIS-AREA WIDE- Procedures/Recovery Actions: -- Risk: Required to meet Risk criteria.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
1-CST-PT-U1	Access Hatch Room to CST Pipe Trench	
1-SWSURTK-U1	Service Water Surge Tank	
2-CST-PT-U1	Aux Building to CST Pipe Trench	
2-RWST-PT-U1	Aux Building to RWST Pipe Trench	
2-SWSURTK-U1	Service Water Surge Tank	
FOST-U1	Fuel Oil Storage Tank	
HV-SWYD-U1	High Voltage Switchyard	
OUTSIDE-U1	General Outside Locations in Main Power Block	
UNGND-U1	Underground Ductbanks Between Various Structures	



Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	1-CST-PT-U1 - Access Hatch Room to CST Pipe Trench	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	1-SWSURTK-U1 - Service Water Surge Tank	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	2-CST-PT-U1 - Aux Building to CST Pipe Trench	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	2-RWST-PT-U1 - Aux Building to RWST Pipe Trench	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	2-SWSURTK-U1 - Service Water Surge Tank	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	FOST-U1 - Fuel Oil Storage Tank	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	HV-SWYD-U1 - High Voltage Switchyard	

### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
S22	Switchyard-Switchyard	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
S23	Switchyard-Switchyard	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
S24	Switchyard-Switchyard	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SH1	Oil Static House (HV Switchyard)-Switchyard	Yes	-	-- Ch3: 3.7 Fire Extinguishers.	Yes	-
SH2	Oil Static House (HV Switchyard)-Switchyard	-	-		Yes	-

### Hose Stations

—

### Active Fire Protection - Detection

—

### Active Fire Protection - Suppression

—

### Fire Barriers

—

### Fire Dampers

—

### Fire Doors

—

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
OSW	Dry Chemical Extinguisher in BRE located by Lower Level	-	-		Yes	-
WN	Dry Chemical Extinguisher in BRE located by ES bldg.	-	-		Yes	-
WS	Dry Chemical Extinguisher in BRE located by Computer bldg.	-	-		Yes	-

#### Hose Stations

—

#### Hydrants

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43V085	East of Fire Pump House	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V086	S of Service Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V088	NE of Auxiliary Building, U2, by fence	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V089	E of Auxiliary Building, U1, by fence	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V090	SE of Auxiliary Building, U1, by fence	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V091	SE of Diesel Building, inside PA, ISFS BRE	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V092	SW of Diesel Building, inside PA, ISFS Access Gate	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V093	NW of Service Building Annex	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V094	E of U2 LVSU	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V095	NW of U2 LVSU	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V096	SW of Engineering Support Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V097	SE of Warehouse	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V098	E of Warehouse	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V099	NE of Warehouse	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V100	NE of Westinghouse Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V101	NW of Turbine Building, U2	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V102	E of SAP	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V103	N of PAP	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V104	NE of Service Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V105	W of Staging Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V106	SW of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V107	NW of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V108	NW of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V109	NW of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V110	NE of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V111	SE of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V112	SE of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V113	SE of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V114	SW of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V115	NE of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V116	NE of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V117	SW of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V118	E of Utility Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V119	SW of U1 LVSU, outside fence by road	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V120	N of Diesel Generator Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43V121	SE of SWIS	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V122	NE of SWIS	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249A	SW of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249B	NW of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249C	NE of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249D	SW of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249E	SE of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249F	NW of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249G	SE of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249H	NW of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249J	SW of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249K	NW of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249L	NE of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249M	SE of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272A	N of Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272B	SE of Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272C	SW of Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272D	Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1P-160-1	YARD Detection System 1P-160-1 in Old PAP Area	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-
WT-83-1	YARD Detection System WT-83-1 in Water Treatment Building	-	Yes		Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1FH-86-1	Wet Pipe Sprinkler System, U0-YARD, Fire Pump House, Room	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-66/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements]	Yes	-
				-- B: Required to support a fire area boundary evaluation.		
U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements]	Yes	-
				-- B: Required to support a fire area boundary evaluation.		
U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements]	Yes	-
				-- B: Required to support a fire area boundary evaluation.		

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-1	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-1	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGRWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGFOST-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGFOST-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGVB-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGVB-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-195/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-242/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-243/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-112/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-179/OUTSIDE-96/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-208/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-349/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-407/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-408/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-423/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-603/OUTSIDE-93/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-86/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-503/OUTSIDE-54/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-131/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-192/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-193/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-194/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-237/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-251/OUTSIDE-31/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-464/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-CTMT/OUTSIDE-55/YARD-105.5	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-82/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-86/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-101/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-103/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-107/OUTSIDE-90/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-108/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-119/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-190/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-191/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-192/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-199/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-234/OUTSIDE-20/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-243/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-400/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-432/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-462/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: YARD-U1 - Yard Area in Main Power Block		Systems and Features				
Fire Zone ID: OUTSIDE-U1 - General Outside Locations in Main Power Block						
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-82/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-83/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGRWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-DU-ABVB-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-DU-ABVB-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2112/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2150/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2179/OUTSIDE-96/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2219/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2309/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2603/OUTSIDE-93/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2131/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2192/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2193/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2194/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2340/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2464/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-105.5	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2503/OUTSIDE-54/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-CTMT/OUTSIDE-55/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 2/OUTSIDE-S02/YARD-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1	3:00, ,	-	Yes		Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2	0:00, ,	-	Yes		Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1	3:00, ,	-	Yes		Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2	0:00, ,	-	Yes		Yes	-
U2-FNP-W-2101/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2103/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2107/OUTSIDE-90/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2108/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2119/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2185/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2190/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2191/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2192/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2199/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2234/OUTSIDE-20/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2243/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/OUTSIDE-42/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U1 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2452/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2462/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-80K/OUTSIDE-U2-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: 1-155-336-03-1	0:00, C. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: 1-155-336-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: 1-155-336-04-1	0:00, C. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: 1-155-336-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1: 1-155-336-08-1	0:00, C. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2: 1-155-336-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1: 1-155-336-11-1	0:00, C. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2: 1-155-336-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1: 1-155-336-14-1	0:00, C. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2: 1-155-336-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-502/OUTSIDE-53/YARD-175: 1-175-125-02	0:00, E. of 502	-	Yes		Yes	-
U1-FNP-N-503/OUTSIDE-54/YARD-175: 1-175-124-01	0:00, N. of 503	-	Yes		Yes	-
U1-FNP-S-502/OUTSIDE-53/YARD-175: 1-175-125-01	0:00, S. of 502	-	Yes		Yes	-
U1-FNP-S-503/OUTSIDE-54/YARD-175: 1-175-124-02	0:00, S. of 503	-	Yes		Yes	-
U2-FNP-N-2503/OUTSIDE-54/YARD-175: 2-175-124-01	0:00, N. of 2503	-	Yes		Yes	-
U2-FNP-S-2503/OUTSIDE-54/YARD-175: 2-175-124-02	0:00, S. of 2503	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155 PA101	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1 234-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2 234-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1 235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2 235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-463/OUTSIDE-4/YARD-155 443	0:00,	-	Yes		Yes	-
U1-FNP-S-464/OUTSIDE-4/YARD-155 442	0:00,	-	Yes		Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155 T115	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 247-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 289-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 247-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 289-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121 204	0:00,	-	Yes		Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U1 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284 T2700	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1 2234-1	0:00,	-	Yes		Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2 2234-2	0:00,	-	Yes		Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1 2235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2 2235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/OUTSIDE-43/YARD-155 2436	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U1-YARD-U1-NA-OUTSIDE-Administrative Control of Vehicles	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U1-YARD-U1-NA-OUTSIDE-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	YARD-U1 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	UNGND-U1 - Underground Ductbanks Between Various Structures	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, a letdown isolation valve, or a letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A PORV, Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump and TDAFW pump supplying Steam Generator 1A/1B/1C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, and RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 1A/1B/1C pressure is monitored. 6. SG Level - Steam Generator 1A/1B/1C level is monitored.	



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Performance-based approach electrical power is supplied by off-site power via SUT 1A/SUT 1B, diesel generator EDG1-2A/EDG-1B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment H	Code Compliance Evaluation for NFPA 20, 2007 Edition, Stationary Pumps for Fire Protection
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 20, 2007 Edition. The approach was to determine the applicable code edition for stationary pumps for fire protection, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Stationary pumps for fire protection were determined to be compliant with the relevant sections of NFPA-20-2007, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment I	Code Compliance Evaluation for NFPA 22, 2008 Edition, Water Tanks for Private Fire Protection
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 22, 2008 Edition. The approach was to determine the applicable code edition for water tanks for private fire protection, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Water tanks for private fire protection were determined to be compliant with the relevant sections of NFPA-22-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1970.</li><li>• All other non-compliances have been provided with justifications.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment J Code Compliance Evaluation for NFPA 24, 2007 Edition, Private Fire Service Mains	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 24, 2007 Edition. The approach was to determine the applicable code edition for private fire service mains, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Private fire service mains were determined to be compliant with the relevant sections of NFPA-24-2007, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the FNP code of record edition of 1973.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable &amp; combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment L Code Compliance Evaluation for NFPA 55, 2005 Edition, Storage, Use and Handling of Compressed Gases and Cryogenic Fluids	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 55, 2005 Edition. NFPA 805 references NFPA 50B for liquefied hydrogen systems; this standard has been superseded by NFPA 55, in which the liquefied hydrogen requirements primarily reside in Chapter 11. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code.</li> <li>• The liquefied hydrogen system was determined to be compliant with the relevant sections of NFPA-55-2005, with the exception of the non-compliances identified in Table 6-1 of the report.</li> <li>• All non-compliances have been provided with justifications or actions have been initiated to make modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-CST-PT-U1	Access Hatch Room to CST Pipe Trench	—	—	—	—
1-SWSURTK-U1	Service Water Surge Tank	—	—	—	—
2-CST-PT-U1	Aux Building to CST Pipe Trench	—	—	—	—
2-RWST-PT-U1	Aux Building to RWST Pipe Trench	—	—	—	—
2-SWSURTK-U1	Service Water Surge Tank	—	—	—	—
FOST-U1	Fuel Oil Storage Tank	—	—	—	—
HV-SWYD-U1	High Voltage Switchyard	—	—	—	—
OUTSIDE-U1	General Outside Locations in Main Power Block	—	E, R, S	E, B	Administrative Control of Vehicles, U1-YARD-U1-NA-OUTSIDE-Administrative Control of Vehicles: -- EEEE/LA: Required to support a fire area boundary evaluation. Combustibles and flammable liquid control, U1-YARD-U1-NA-OUTSIDE-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, 1P-160-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-1:

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-66/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-66/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2:



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1:

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGRWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGFOST-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGFOST-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGVB-A/YARD-155:

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGVB-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-242/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-243/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-112/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-179/OUTSIDE-96/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-208/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-349/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-407/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-408/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-423/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-502/OUTSIDE-53/YARD-175:

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-603/OUTSIDE-93/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-610/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-86/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-N-111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175:



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-131/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-193/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-194/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-251/OUTSIDE-31/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-464/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-465/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-105.5: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-129:

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-82/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-86/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>S/YARD-173-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-101/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-103/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-107/OUTSIDE-90/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-108/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-119/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-128/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-151/OUTSIDE-4/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-165/OUTSIDE-4/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-166/OUTSIDE-4/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-190/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-191/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-192/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-195/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-195/OUTSIDE-6/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-105:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-129:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-199/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-227/OUTSIDE-13/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-234/OUTSIDE-20/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-243/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-400/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-432/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-462/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-465/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-82/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-83/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGRWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-DU-ABVB-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-DU-ABVB-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1:

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2112/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2150/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2179/OUTSIDE-96/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2207/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2219/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2309/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2603/OUTSIDE-93/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2610/OUTSIDE-4/YARD-131:



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2131/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2193/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2194/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2340/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2463/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2464/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2478/OUTSIDE-4/YARD-155:

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-105.5: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 4/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-CTMT/OUTSIDE-55/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB3-A/YARD-155:

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2101/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2103/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2107/OUTSIDE-90/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2108/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2119/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2165/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2166/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2185/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2190/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2191/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U1 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-2199/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2234/OUTSIDE-20/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2243/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/OUTSIDE-42/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2462/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2463/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2505/OUTSIDE-4/YARD-175:

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U1 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-80K/OUTSIDE-U2-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.
UNGND-U1	Underground Ductbanks Between Various Structures	—	—	—	—

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block

**Fire Area Definition**

**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

Fire Zone ID	Description	Elevation(s)
1-CST-PT-U2	Access Hatch Room to CST Pipe Trench	
1-SWSURTK-U2	Service Water Surge Tank	
2-CST-PT-U2	Aux Building to CST Pipe Trench	
2-RWST-PT-U2	Aux Building to RWST Pipe Trench	
2-SWSURTK-U2	Service Water Surge Tank	
FOST-U2	Fuel Oil Storage Tank	
HV-SWYD-U2	High Voltage Switchyard	
OUTSIDE-U2	General Outside Locations in Main Power Block	
UNGND-U2	Underground Ductbanks Between Various Structures	

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	1-CST-PT-U2 - Access Hatch Room to CST Pipe Trench	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—



Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	1-SWSURTK-U2 - Service Water Surge Tank	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	2-CST-PT-U2 - Aux Building to CST Pipe Trench	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	2-RWST-PT-U2 - Aux Building to RWST Pipe Trench	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	2-SWSURTK-U2 - Service Water Surge Tank	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	FOST-U2 - Fuel Oil Storage Tank	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	HV-SWYD-U2 - High Voltage Switchyard	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
Restricted transient controls	-	-		Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

#### Extinguishers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
OSW	Dry Chemical Extinguisher in BRE located by Lower Level	-	-		Yes	-
WN	Dry Chemical Extinguisher in BRE located by ES bldg.	-	-		Yes	-
WS	Dry Chemical Extinguisher in BRE located by Computer bldg.	-	-		Yes	-

#### Hose Stations

#### Hydrants

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43V085	East of Fire Pump House	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V086	S of Service Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V088	NE of Auxiliary Building, U2, by fence	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V089	E of Auxiliary Building, U1, by fence	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V090	SE of Auxiliary Building, U1, by fence	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V091	SE of Diesel Building, inside PA, ISFS BRE	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V092	SW of Diesel Building, inside PA, ISFS Access Gate	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V093	NW of Service Building Annex	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V094	E of U2 LVSU	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V095	NW of U2 LVSU	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V096	SW of Engineering Support Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V097	SE of Warehouse	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V098	E of Warehouse	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V099	NE of Warehouse	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V100	NE of Westinghouse Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V101	NW of Turbine Building, U2	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V102	E of SAP	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V103	N of PAP	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V104	NE of Service Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V105	W of Staging Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V106	SW of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V107	NW of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V108	NW of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V109	NW of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V110	NE of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V111	SE of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V112	SE of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V113	SE of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V114	SW of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V115	NE of Cooling Tower 1A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V116	NE of Cooling Tower 1B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V117	SW of Cooling Tower 1C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V118	E of Utility Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V119	SW of U1 LVSU, outside fence by road	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V120	N of Diesel Generator Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
N1Y43V121	SE of SWIS	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V122	NE of SWIS	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249A	SW of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249B	NW of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249C	NE of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249D	SW of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249E	SE of Cooling Tower 2A	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249F	NW of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249G	SE of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249H	NW of Cooling Tower 2B	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249J	SW of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249K	NW of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249L	NE of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V249M	SE of Cooling Tower 2C	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272A	N of Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272B	SE of Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272C	SW of Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-
N1Y43V272D	Training Building	Yes	-	-- Ch3: 3.5.15 [Water Supply Hydrant Code Requirements]	Yes	-

### Active Fire Protection - Detection

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
1P-160-1	YARD Detection System 1P-160-1 in Old PAP Area	-	Yes		Yes	-
WT-83-1	YARD Detection System WT-83-1 in Water Treatment Building	-	Yes	-- E: Required to support an Engineering Evaluation. -- R: Required to meet Risk criteria. -- S: Required to meet Separation criteria.	Yes	-

### Active Fire Protection - Suppression

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
WS-1FH-86-1	Wet Pipe Sprinkler System, U0-YARD, Fire Pump House, Room	-	-		-	-

### Fire Barriers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U2 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-66/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements]	Yes	-
				-- B: Required to support a fire area boundary evaluation.		
U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements]	Yes	-
				-- B: Required to support a fire area boundary evaluation.		
U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements]	Yes	-
				-- B: Required to support a fire area boundary evaluation.		

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-1	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U2 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-1	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U2 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-1	3:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-71/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-DGB/OUTSIDE-71/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-1	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U2 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-2	0:00, ,	Yes	Yes	-- Ch3: 3.5.5 [Water Supply Pump Separation Requirements] -- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGRWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGFOST-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGFOST-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGVB-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-AII-NA/OUTSIDE-DU-DGVB-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-195/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-242/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-243/OUTSIDE-6/YARD-155	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-112/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-179/OUTSIDE-96/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/4-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-208/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-349/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-407/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-408/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-423/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-603/OUTSIDE-93/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-U1 TURB/OUTSIDE-86/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-503/OUTSIDE-54/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-Elev 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-N-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-STAIR 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-131/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-192/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-193/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-194/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-237/OUTSIDE-4/YARD-121	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-251/OUTSIDE-31/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-252/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-464/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-S-CTMT/OUTSIDE-55/YARD-105.5	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-CTMT/OUTSIDE-55/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-Elev 1/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-82/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-86/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-101/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-103/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-107/OUTSIDE-90/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-108/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-119/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-190/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-191/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-192/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-195/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-199/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-234/OUTSIDE-20/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-243/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-400/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-432/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-462/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-463/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-465/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-502/OUTSIDE-53/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-506/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

Fire Area ID: YARD-U2 - Yard Area in Main Power Block		Systems and Features				
Fire Zone ID: OUTSIDE-U2 - General Outside Locations in Main Power Block						
System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-W-NA/OUTSIDE-1-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-NA/OUTSIDE-1-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-82/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-83/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGRWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-2-DU-DGSWIS-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-DU-ABVB-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-AII-NA/OUTSIDE-DU-ABVB-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2112/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2150/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2160/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2178/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2179/OUTSIDE-96/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2187/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2188/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2219/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2238/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2309/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2329/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2342/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2424/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2425/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2426/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2427/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2446/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2603/OUTSIDE-93/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2604/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2607/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2610/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-U2 TURB/OUTSIDE-85G/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2131/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2186/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2188/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2192/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2193/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2194/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2237/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2241/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2340/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2459/OUTSIDE-39/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2464/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2478/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2501/OUTSIDE-51/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-2608/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-2609/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-105.5	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-CTMT/OUTSIDE-55/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-Elev 4/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85A/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85D/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2104/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2111/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2239/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2341/OUTSIDE-4/YARD-131	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2348/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2349/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2350/OUTSIDE-39/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2503/OUTSIDE-54/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-CTMT/OUTSIDE-55/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-Elev 2/OUTSIDE-S02/YARD-83	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-S-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB3-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-STAIR 2/OUTSIDE-S02/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1	3:00, ,	-	Yes		Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2	0:00, ,	-	Yes		Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1	3:00, ,	-	Yes		Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2	0:00, ,	-	Yes		Yes	-
U2-FNP-W-2101/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2103/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2107/OUTSIDE-90/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2108/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2119/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2128/OUTSIDE-1/YARD-83	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2151/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2165/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2166/OUTSIDE-4/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2185/OUTSIDE-6/YARD-100	0:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2190/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2191/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2192/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2195/OUTSIDE-6/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-105	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-129	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2196/OUTSIDE-1/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2199/OUTSIDE-6/YARD-100	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2227/OUTSIDE-13/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2234/OUTSIDE-20/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2240/OUTSIDE-4/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2241/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2242/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2242/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2243/OUTSIDE-6/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2243/OUTSIDE-6/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2252/OUTSIDE-30/YARD-127	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2300/OUTSIDE-13/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2339/OUTSIDE-42/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2345/OUTSIDE-42/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Fire Zone ID:** OUTSIDE-U2 - General Outside Locations in Main Power Block

### Systems and Features

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-W-2452/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2462/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2463/OUTSIDE-43/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2466/OUTSIDE-13/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2500/OUTSIDE-13/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2502/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2503/OUTSIDE-54/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2504/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2505/OUTSIDE-4/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2506/OUTSIDE-43/YARD-175	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-80K/OUTSIDE-U1-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-80K/OUTSIDE-U2-80/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-100	2:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-121	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-139	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-077/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-078/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-079/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB1-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB1-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB2-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB2-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB3-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB4-A/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-NA/OUTSIDE-2-SVB4-B/YARD-155	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-81/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-85C/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-U2 TURB/OUTSIDE-85E/YARD-137	3:00, ,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Fire Dampers

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: 1-155-336-03-1	0:00, C. of DG 2-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: 1-155-336-03-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: 1-155-336-04-1	0:00, C. of DG 1-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: 1-155-336-04-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U2 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1: 1-155-336-08-1	0:00, C. of DG 2-B	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2: 1-155-336-08-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1: 1-155-336-11-1	0:00, C. of DG 1-C	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2: 1-155-336-11-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1: 1-155-336-14-1	0:00, C. of DG 1-2A	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2: 1-155-336-14-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-E-502/OUTSIDE-53/YARD-175: 1-175-125-02	0:00, E. of 502	-	Yes		Yes	-
U1-FNP-N-503/OUTSIDE-54/YARD-175: 1-175-124-01	0:00, N. of 503	-	Yes		Yes	-
U1-FNP-S-502/OUTSIDE-53/YARD-175: 1-175-125-01	0:00, S. of 502	-	Yes		Yes	-
U1-FNP-S-503/OUTSIDE-54/YARD-175: 1-175-124-02	0:00, S. of 503	-	Yes		Yes	-
U2-FNP-N-2503/OUTSIDE-54/YARD-175: 2-175-124-01	0:00, N. of 2503	-	Yes		Yes	-
U2-FNP-S-2503/OUTSIDE-54/YARD-175: 2-175-124-02	0:00, S. of 2503	-	Yes		Yes	-

### Fire Doors

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155 PA101	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-1 234-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL A/NA-1-075/31-155-2 234-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-1 235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-N-TUNNEL B/NA-1-076/30-155-2 235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-463/OUTSIDE-4/YARD-155 443	0:00,	-	Yes		Yes	-
U1-FNP-S-464/OUTSIDE-4/YARD-155 442	0:00,	-	Yes		Yes	-
U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155 T115	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 247-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1 289-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 247-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-2 289-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-E-2207/OUTSIDE-4/YARD-121 204	0:00,	-	Yes		Yes	-

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Systems and Features</b>
<b>Fire Zone ID:</b>	OUTSIDE-U2 - General Outside Locations in Main Power Block	

System/Feature ID	Description	Ch.3	Ch.4	Reason(s)	Monitoring	HSS
U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284 T2700	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-1 2234-1	0:00,	-	Yes		Yes	-
U2-FNP-S-TUNNEL A/NA-2-075/31-155-2 2234-2	0:00,	-	Yes		Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-1 2235-1	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-S-TUNNEL B/NA-2-076/30-155-2 2235-2	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-
U2-FNP-W-2452/OUTSIDE-43/YARD-155 2436	0:00,	-	Yes	-- B: Required to support a fire area boundary evaluation.	Yes	-

### Electrical Raceway Fire Barrier Systems

—

### Other Passive Features

System/Feature ID	Ch.3	Ch.4	Reason(s)	Monitor	HSS
U2-YARD-U2-NA-OUTSIDE-Administrative Control of Vehicles	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-
U2-YARD-U2-NA-OUTSIDE-Combustibles and flammable liquid control	-	Yes	-- E: Required to support a fire area boundary evaluation.	Yes	-

Fire Safety Analysis

Fire Area ID:	YARD-U2 - Yard Area in Main Power Block	Systems and Features
Fire Zone ID:	UNGND-U2 - Underground Ductbanks Between Various Structures	

Extinguishers

—

Hose Stations

—

Active Fire Protection - Detection

—

Active Fire Protection - Suppression

—

Fire Barriers

—

Fire Dampers

—

Fire Doors

—

Electrical Raceway Fire Barrier Systems

—

Other Passive Features

—

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
1 Primary Control Station	Plant shutdown is performed from the Control Room.	
2.1 Reactivity Control - Reactor Trip	Reactor is manually tripped from the Control Room.	
2.2 Reactivity Control - Maintain Subcritical Conditions	Subcritical conditions are maintained by isolating the VCT to prevent boron dilution and by charging borated water from the RWST using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power.	
3.1 RCS Inventory Control - RCS Makeup	RCS inventory is controlled using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power aligned to the RWST.	
3.2 RCS Inventory Control - Isolate Leakage Paths	Normal letdown is isolated using orifice isolation valves, letdown isolation valve or letdown path containment isolation valve. Excess letdown is isolated using one or more excess letdown or containment isolation valves. PZR PORV leakage paths are isolated using Train A PORV and Train B PORV. The RCS to RHR high/low pressure interface is isolated using the Train A/Train B RHR inboard isolation valve and Train A/Train B RHR outboard isolation valve.	
3.3 RCS Inventory Control - RCP Seal Integrity	Maintain RCP Seal Integrity - RCP seal integrity is maintained by tripping all RCPs, maintaining normal seal injection using Train A charging pump, Train B charging pump or swing charging pump via Train A/Train B power, and preventing failure of the RCP thermal barriers. RCP seal injection paths are secured by isolating the supply and discharge seal injection lines. CCW to RCP thermal barriers are isolated using containment isolation valves or the CCW to RCP thermal barrier isolation valve.	
4.1 RCS Pressure Control - Pressure Transient	Undesired depressurization due to inadvertent spray is prevented by ensuring auxiliary spray valve remains closed and the Loop 1 and Loop 2 RCPs are shut off. Undesired pressure increase is prevented by deenergizing all pressurizer heater groups.	
4.2 RCS Pressure Control - Positive Pressure Control	Positive control of RCS pressure is accomplished with Train A/Train B PORV or aux spray for pressure reduction and Pressurizer Heater Group A/B for pressure increase.	
5 Decay Heat Removal	Decay heat removal during HSD is accomplished using Train A MDAFW pump, Train B MDAFW pump or TDAFW pump supplying Steam Generator 2A/2B/2C. Main feed is isolated to prevent uncontrolled cooldown.	
6 Process Monitoring	1. Shutdown Margin - Shutdown margin is monitored by source range detector Ch 1/Ch 2. 2. RCS Pressure - RCS pressure is monitored by PZR narrow range Ch 1/Ch 2/Ch 3, PZR non-safety channel, RCS wide range pressure for Loop 1/Loop 3. 3. Pressurizer Level - Pressurizer level is monitored by PZR level Ch 1/Ch 2/Ch 3. 4. RCS Temperature - RCS Loop 1/Loop 2/Loop 3 temperature is monitored by loop hot and cold leg RTDs. 5. SG Pressure - Steam Generator 2A/2B/2C pressure is monitored. 6. SG Level - Steam Generator 2A/2B/2C level is monitored.	

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

**Nuclear Safety Performance Goals**

Performance Goal	Method of Accomplishment	Comments
7.1 Vital Auxiliaries – Electrical	1. Performance-based approach electrical power is supplied by off-site power via SUT 2A/SUT 2B, diesel generator EDG1-2A/EDG-2B. 2. 4.16 kV and 600 V power is supplied by Train A/Train B distribution equipment. 3. 125 VDC power and 120 VAC power is supplied by Train A/Train B equipment.	
7.2 Vital Auxiliaries – Service Water	Performance-based approach Train A/Train B service water is provided with two service water pumps in service recirculating to the pond or Train A/Train B service water is provided with one service water pump in service recirculating to the pond and non-essential turbine building loads isolated.	
7.3 Vital Auxiliaries – Component Cooling Water	Train A/Train B component cooling water is provided with non-essential loads isolated.	
7.4 Vital Auxiliaries – HVAC	Control Room cooling is provided by Train A/Train B HVAC. Room cooling at essential locations is provided with HVAC equipment corresponding to the service water train.	

### Fire Suppression Activities Effect on Nuclear Safety Performance Criteria

Safe and stable conditions can be achieved and maintained utilizing equipment and cables outside of the area of fire suppression activity. No automatic suppression is installed in this area. Discharge of manual suppression water to adjacent compartments is controlled; therefore, fire suppression activities will not adversely affect the plant's ability to achieve the nuclear safety performance criteria.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment H	Code Compliance Evaluation for NFPA 20, 2007 Edition, Stationary Pumps for Fire Protection
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 20, 2007 Edition. The approach was to determine the applicable code edition for stationary pumps for fire protection, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Stationary pumps for fire protection were determined to be compliant with the relevant sections of NFPA-20-2007, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the FNP code of record edition of 1974.</li><li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li></ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment I	Code Compliance Evaluation for NFPA 22, 2008 Edition, Water Tanks for Private Fire Protection
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 22, 2008 Edition. The approach was to determine the applicable code edition for water tanks for private fire protection, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"><li>• An applicability determination was completed to identify the relevant sections of the code</li><li>• Water tanks for private fire protection were determined to be compliant with the relevant sections of NFPA-22-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li><li>• Some non-compliances in Table 6-1 were closed in Appendix C, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1970.</li><li>• All other non-compliances have been provided with justifications.</li></ul>	



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment J Code Compliance Evaluation for NFPA 24, 2007 Edition, Private Fire Service Mains	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 24, 2007 Edition. The approach was to determine the applicable code edition for private fire service mains, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Private fire service mains were determined to be compliant with the relevant sections of NFPA-24-2007, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were closed in Appendix D, which vetted the 2007 edition non-compliances against the FNP code of record edition of 1973.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment K Code Compliance Evaluation for NFPA 30, 2008 Edition, Flammable and Combustible Liquids Code	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 30, 2008 Edition. The approach was to determine the applicable code edition for flammable &amp; combustible liquids, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code</li> <li>• Flammable and combustible liquids were determined to be compliant with the relevant sections of NFPA-30-2008, with the exception of the non-compliances identified in Table 6-1 of the report</li> <li>• Some non-compliances in Table 6-1 were resolved in Appendix D, which vetted the 2008 edition non-compliances against the FNP code of record edition of 1972.</li> <li>• All other non-compliances have either been provided with justifications, or SNC has initiated actions to make document revisions and/or modifications to bring the element into compliance.</li> </ul>	

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Engineering Evaluations</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	
<b>Engineering Evaluation ID</b>	ENGDOC, SM-C051326701-007, Attachment L Code Compliance Evaluation for NFPA 55, 2005 Edition, Storage, Use and Handling of Compressed Gases and Cryogenic Fluids	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	Yes	
<b>Adequate for the Hazard</b>	No	
<b>Summary</b>	<p>Purpose:</p> <p>This evaluation was conducted to determine the current level of compliance with the applicable requirements of NFPA 55, 2005 Edition. NFPA 805 references NFPA 50B for liquefied hydrogen systems; this standard has been superseded by NFPA 55, in which the liquefied hydrogen requirements primarily reside in Chapter 11. The approach was to determine the applicable code edition for the applicable systems, identify applicable sections of the code requiring verification, and perform those verifications.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• An applicability determination was completed to identify the relevant sections of the code.</li> <li>• The liquefied hydrogen system was determined to be compliant with the relevant sections of NFPA-55-2005, with the exception of the non-compliances identified in Table 6-1 of the report.</li> <li>• All non-compliances have been provided with justifications or actions have been initiated to make modifications to bring the element into compliance.</li> </ul>	
<b>Engineering Evaluation ID</b>	SM-C051326701-006 Identify Regulatory Fire Barriers	
<b>Inactive</b>	No	
<b>Functionally Equivalent</b>	No	
<b>Adequate for the Hazard</b>	Yes	
<b>Summary</b>	<p>Purpose:</p> <p>This report includes engineering equivalency evaluations for several fire area boundaries in Units 1 and 2 power block buildings, as well as the shared areas such as SWIS, RWIS and the Diesel Generator Building. The approach was to examine any boundary for which there was not a documented/credited 3-hr rated barrier. Evaluations were also included non-rated reach rod penetrations and separation between pressure sensing lines.</p> <p>Bases for Acceptability:</p> <ul style="list-style-type: none"> <li>• The fire areas, fire zones and rooms on both sides of the barrier were identified,</li> <li>• The construction of the boundary and the potential issue with the element in question was described,</li> <li>• The fire hazards and fire protection features impacting the barrier were described,</li> <li>• Elements with construction features equal to 3-hr boundaries were credited as such,</li> <li>• The evaluation demonstrates that elements with construction features not equivalent to 3-hr rated boundaries are adequate for the hazard.</li> </ul>	

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
1-CST-PT-U2	Access Hatch Room to CST Pipe Trench	—	—	—	—
1-SWSURTK-U2	Service Water Surge Tank	—	—	—	—
2-CST-PT-U2	Aux Building to CST Pipe Trench	—	—	—	—
2-RWST-PT-U2	Aux Building to RWST Pipe Trench	—	—	—	—
2-SWSURTK-U2	Service Water Surge Tank	—	—	—	—
FOST-U2	Fuel Oil Storage Tank	—	—	—	—
HV-SWYD-U2	High Voltage Switchyard	—	—	—	—
OUTSIDE-U2	General Outside Locations in Main Power Block	—	E, R, S	E, B	Administrative Control of Vehicles, U2-YARD-U2-NA-OUTSIDE-Administrative Control of Vehicles: -- EEEE/LA: Required to support a fire area boundary evaluation. Combustibles and flammable liquid control, U2-YARD-U2-NA-OUTSIDE-Combustibles and flammable liquid control: -- EEEE/LA: Required to support a fire area boundary evaluation. Detection System, WT-83-1: -- EEEE/LA: Required to support an Engineering Evaluation. -- Risk: Required to meet Risk criteria. -- Separation: Required to meet Separation criteria. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-ALL-NA/OUTSIDE-DU-SWISVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-58/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-59/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-60/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-62/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-63/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-64/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-65/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-66/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-1:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-73/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-74/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-CEILING-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-66/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-66/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH1/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-E-FPH3/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-E-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-58/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-59/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-60/YARD-155-2:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-61/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-62/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-63/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-64/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-65/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-66/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-73/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-74/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-FLOOR-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-A/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-RVR INTK/OUTSIDE-70/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-1:



## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-N-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-RVR INTK/OUTSIDE-69/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-73/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-74/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-S-S.W. INTK/OUTSIDE-76/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-56C/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U0-FNP-W-DGB/OUTSIDE-57/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-71/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-DGB/OUTSIDE-71/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH1/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH2/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-FPH3/YARD-FPHB/FPHB-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-NA/OUTSIDE-SWWPVB-B/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-67/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-RVR INTK/OUTSIDE-68/YARD-102-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-72/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U0-FNP-W-S.W. INTK/OUTSIDE-75/YARD-188-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGRWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-1-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGFOST-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGFOST-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGVB-A/YARD-155:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-All-NA/OUTSIDE-DU-DGVB-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL A/OUTSIDE-1-075/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-ALL-TUNNEL B/OUTSIDE-1-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-242/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-243/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-251/OUTSIDE-31/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-Ceiling-252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-112/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-179/OUTSIDE-96/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/4-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-208/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-349/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-407/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-408/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-423/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-502/OUTSIDE-53/YARD-175:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-603/OUTSIDE-93/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-610/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-E-U1 TURB/OUTSIDE-86/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-N-111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-Elev 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-STAIR 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL A/NA-1-075/31-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-N-TUNNEL B/NA-1-076/30-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-131/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-193/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-194/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-S-241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-251/OUTSIDE-31/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-252/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-464/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-465/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-478/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-105.5: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-129:



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-CTMT/OUTSIDE-55/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-Elev 1/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-82/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-86/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/OUTSIDE-Stairwell-S/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-S/YARD-173-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-S-U1 TURB/SERVICE BUILDING-STAIRWELL-

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					<p>S/YARD-173-2:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-101/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-103/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-107/OUTSIDE-90/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-108/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-119/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-128/OUTSIDE-1/YARD-83:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-151/OUTSIDE-4/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-165/OUTSIDE-4/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-166/OUTSIDE-4/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-190/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-191/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-192/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-195/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-195/OUTSIDE-6/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-105:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-129:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-196/OUTSIDE-1/YARD-155:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-199/OUTSIDE-6/YARD-100:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-227/OUTSIDE-13/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-234/OUTSIDE-20/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-121:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-139:</p> <p>-- Barrier: Required to support a fire area boundary evaluation.  FireBarrier, U1-FNP-W-240/OUTSIDE-4/YARD-155:</p>

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-243/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-400/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-432/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-462/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-463/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-465/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-502/OUTSIDE-53/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-506/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-139: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U1-FNP-W-Elev 1/OUTSIDE-S01/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-NA/OUTSIDE-1-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-82/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-83/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U1-FNP-W-U1 TURB/OUTSIDE-85I/YARD-189: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-NA/OUTSIDE-1-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-NA/OUTSIDE-2-076/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGRWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGSWIS-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-2-DU-DGSWIS-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-DU-ABVB-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-All-NA/OUTSIDE-DU-ABVB-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-1: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL A/OUTSIDE-2-075/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-1:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-ALL-TUNNEL B/OUTSIDE-2-076/YARD-155-2: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2251/OUTSIDE-31/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-Ceiling-2252/OUTSIDE-30/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2112/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2150/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2160/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2178/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2179/OUTSIDE-96/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2187/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2188/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2207/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2219/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-E-2238/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2309/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2329/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2342/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2424/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2425/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2426/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2427/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2446/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2603/OUTSIDE-93/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2604/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2607/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-2610/OUTSIDE-4/YARD-131:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-STAIR 8/OUTSIDE-S08/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-E-U2 TURB/OUTSIDE-85G/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2131/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2186/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2188/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2193/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2194/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation.



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2237/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2241/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2340/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2459/OUTSIDE-39/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2463/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2464/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2478/OUTSIDE-4/YARD-155:



## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2501/OUTSIDE-51/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2608/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-2609/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-105.5: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-CTMT/OUTSIDE-55/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-Elev 4/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB3-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85A/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85D/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-N-U2 TURB/OUTSIDE-85J/YARD-284: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2104/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2111/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2239/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2341/OUTSIDE-4/YARD-131: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2348/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2349/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2350/OUTSIDE-39/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2505/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-CTMT/OUTSIDE-55/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-Elev 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB3-A/YARD-155:

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 1/OUTSIDE-S01/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-S-STAIR 2/OUTSIDE-S02/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2101/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2103/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2107/OUTSIDE-90/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2108/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2119/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2128/OUTSIDE-1/YARD-83: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2151/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2165/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2166/OUTSIDE-4/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2185/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2190/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2191/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2192/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2195/OUTSIDE-6/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-105: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-129: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2196/OUTSIDE-1/YARD-155: -- Barrier: Required to support a fire area boundary evaluation.

## Fire Safety Analysis

**Fire Area ID:** YARD-U2 - Yard Area in Main Power Block  
**Compliance Basis:** NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions

### Required Systems and Features

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					FireBarrier, U2-FNP-W-2199/OUTSIDE-6/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2227/OUTSIDE-13/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2234/OUTSIDE-20/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2240/OUTSIDE-4/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2241/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2242/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2242/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2243/OUTSIDE-6/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2243/OUTSIDE-6/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2252/OUTSIDE-30/YARD-127: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2300/OUTSIDE-13/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2339/OUTSIDE-42/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2345/OUTSIDE-42/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2452/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2462/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2463/OUTSIDE-43/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2466/OUTSIDE-13/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2500/OUTSIDE-13/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2502/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2503/OUTSIDE-54/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2504/OUTSIDE-4/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2505/OUTSIDE-4/YARD-175:

## Fire Safety Analysis

<b>Fire Area ID:</b>	YARD-U2 - Yard Area in Main Power Block	<b>Required Systems and Features</b>
<b>Compliance Basis:</b>	NFPA 805, Section 4.2.4.2 Performance-Based Approach - Fire Risk Evaluation with simplifying deterministic assumptions	

Fire Zone ID	Description	Required Suppression System	Required Detection System	Required Fire Protection Feature	Required Fire Protection Feature and System Details
					-- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-2506/OUTSIDE-43/YARD-175: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-80K/OUTSIDE-U1-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-80K/OUTSIDE-U2-80/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-100: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-121: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-139: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-Elev 4/OUTSIDE-S01/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-077/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-078/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-079/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB1-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB1-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB2-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB2-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB3-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB4-A/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-NA/OUTSIDE-2-SVB4-B/YARD-155: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-81/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-85C/YARD-137: -- Barrier: Required to support a fire area boundary evaluation. FireBarrier, U2-FNP-W-U2 TURB/OUTSIDE-85E/YARD-137: -- Barrier: Required to support a fire area boundary evaluation.
UNGND-U2	Underground Ductbanks Between Various Structures	—	—	—	—

**G. RADIOACTIVE RELEASE RESULTS**

This Appendix previously provided a summary of the Radioactive Release results documented in calculation SM-C051326701-010, NFPA 805 Radiological Release Calculation. However, since this calculation is an active, controlled document, maintaining a copy of the same information in this DBD (also a controlled document) was not necessary. Therefore, the summary results have been deleted from this attachment.

For a current version of the Radioactive Release evaluation and results, see calculation SM-C051326701-010.

No additional pages